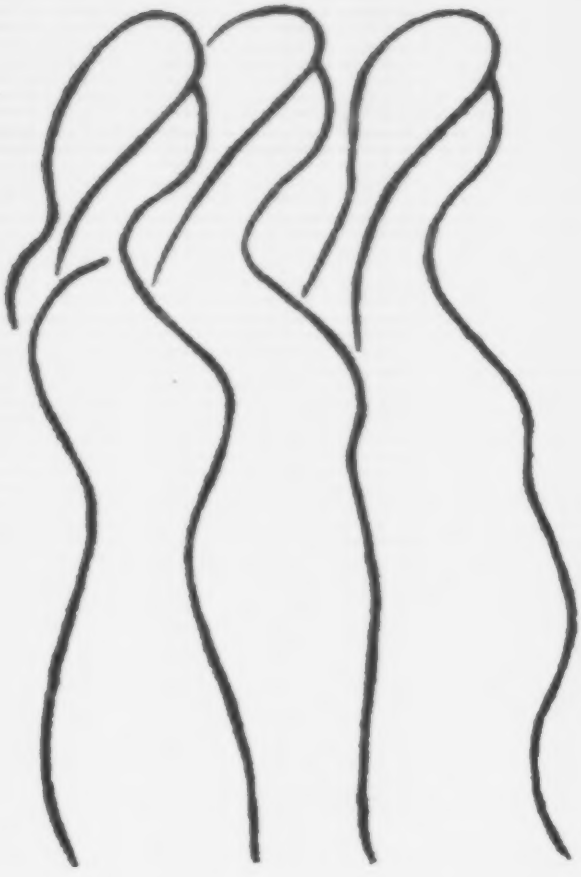

Alberta Reproductive Health: Pregnancies and Births

REPORT

2002

Alberta
HEALTH AND WELLNESS

ALBERTA MEDICAL ASSOCIATION

105-07378/

ISSN 1480-1876

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Alberta Reproductive Health: Pregnancies and Births 2002

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Executive Summary

Alberta Reproductive Health: Pregnancies and Births 2002
EXECUTIVE SUMMARY

This report follows the April 2001 Alberta Reproductive Health: Pregnancy Outcomes report. The report has been renamed *Alberta Reproductive Health: Pregnancies and Births*, to reflect the evolution of the report into areas other than those strictly defined as outcomes of pregnancy. The current report is based on data for the fifteen-year period from 1986 to 2000. New to the report are maternal pre- and postnatal morbidity data, infant morbidity data, and data on number of live singleton births to mothers. Also included for the first time is a resource list, including references (primarily in the form of Internet addresses) for relevant reproductive health-related Web sites and reports.

Executive Summary

Contents

Data are provided on the following topics: Estimated pregnancies, spontaneous abortions, induced abortions, procedures related to delivery, maternal age, maternal prenatal morbidity, maternal prenatal behaviours, fertility rates, live births, birth weight, pre-term births, multiple births, infant morbidity, stillbirths, mortality (perinatal, neonatal, infant, and maternal), number of live births to mothers, maternal postnatal morbidity, and maternal postnatal behaviours.

Wherever possible and appropriate, data are broken down by regional health authorities (RHAs), age groups, time periods, and risk factors. "Residence RHA" refers to the regional health authority in which the mother resided at the time of the relevant event, and "Facility RHA" refers to the regional health authority where the relevant event occurred. RHA boundaries changed slightly in April 2001; all analyses reflect these new boundaries.

Data Sources

Data sources include Vital Statistics, Alberta Health and Wellness Administrative databases, hospital statistics reported to the Alberta Medical Association (AMA) Committee on Reproductive Care, case information from the hospital medical records departments and offices of the medical examiners, the Northern and Central Alberta Perinatal Outreach Program, the Southern Alberta Perinatal Outreach Program, Statistics Canada publications, and Health Canada publications. In this year's report, *two years of data appear for the statistics reported to the AMA Committee on Reproductive Care,* so that all Alberta data are now reported to the end of 2000.

Overview

We are witnessing profound changes in reproductive health in Alberta. While the number of estimated pregnancies is relatively stable, induced abortion rates have been steadily increasing. Alberta's population is also growing, resulting in a continuing pattern of decreasing fertility rates. Average maternal age continues to increase. Fertility rates continue to rise for mothers over 30, and to decline for younger mothers. Pre-term birth, high birth weight and multiple birth rates for the year 2000 were all at maximum rates for the fifteen-year period from 1986 to 2000. Infant and maternal death rates remain low.

Pregnancies

Estimated Pregnancies

- The estimated pregnancy rate reached a new low point in 2000, at 64.6 estimated pregnancies per 1,000 women aged 15-49. Pregnancy rates decreased 19.1% between 1986 and 2000.

Spontaneous Abortions

- Spontaneous abortion rates per 1,000 women aged 15-49 have decreased along with decreasing fertility rates.
- The proportion of estimated pregnancies that ended in spontaneous abortion did not show a significant linear trend from 1986 to 2000.

Reproductive Care Services

- The proportion of estimated pregnancies that ended in induced abortion increased linearly from 1986 to 2000. In 2000, 20.1% of estimated pregnancies ended in induced abortion.
- The induced abortion rate per 1,000 women aged 15-49 increased 42% from 1986 to 2000.
- Induction of labour occurred in 25.9% of live births in 2000; this rate represents the highest rate in the fifteen-year period from 1986 to 2000.
- Epidural analgesia rates also continued to rise, with an epidural analgesia rate of 33.1 (per 100 hospital deliveries) in 2000.
- Cesarean section rates have increased since 1995, and the 2000 rate of 20.2 (per 100 hospital deliveries) represents the fifteen-year high.
- Forceps delivery rates have declined, while vacuum extraction rates have increased from 1986 to 2000. In 2000, 6.1% of deliveries involved forceps, and 10.6% were by vacuum extraction.
- The vaginal breech delivery rate was 0.6 (per 100 hospital deliveries) in 2000.

Maternal Factors

Maternal Age

- Mean maternal age continued its increasing trend; the average age at childbirth was 28.3 years in Alberta in 2000, which was the fifteen-year high.
    - Older mothers are at risk relative to younger mothers for both pregnancy complications and negative birth outcomes, including congenital anomalies, pre-term births, and low birth weight births. Multiple births, which have increased risk of negative outcome, are more common in older mothers as well.

Executive Summary

Maternal Prenatal Morbidity

- Maternal prenatal morbidity data for 1999 and 2000 combined appear in this year's report for the first time.
  - High maternal pre-pregnancy weight was quite common; 7.4% of women had a pre-pregnancy weight of more than 91 kilograms.
  - Other pre-pregnancy conditions (including pre-existing diabetes, heart disease, pre-existing hypertension, and chronic renal disease) were rare, each affecting less than 1 percent of delivering women.
- Pregnancy complications were reported with a higher frequency than pre-pregnancy conditions.
  - Bleeding in pregnancy prior to 20 weeks gestation occurred in 5.2% of women giving birth; rates were lower for bleeding later in pregnancy and for bleeding both prior to and after 20 weeks gestation.
  - Pregnancy-induced hypertension was reported in 4.8% of delivering women.
  - Gestational diabetes was a factor for 3.2% of women, with rates increasing considerably with maternal age.

Maternal Prenatal Behaviours

- For 1998 to 2000 combined, 25.7% of Alberta women who gave birth to live infants smoked at some point during pregnancy, 4.2% reported consuming alcohol during pregnancy, and street drugs were used in 1.7% of pregnancies.
  - Smoking, drinking alcohol, and using street drugs were all associated with increased incidence of low birth weight and pre-term birth.
  - Mothers who engaged in these risky behaviours were younger on average than mothers who did not.
- Prenatal classes were attended by 63.5% of women having a first live birth, and prenatal class attendance was associated with decreased incidence of low birth weight and pre-term birth.

Births

Fertility Rates

- Fertility rates are clearly declining in Alberta (and across Canada).
  - The general fertility rate (number of live births per 1,000 women aged 15-49 in a given year) was 45.6 in 2000, while the total fertility rate (number of live births per 1,000 women aged 15-49 over a lifetime) was 1,660.
    - Both of these rates reached fifteen-year lows in 2000.

- Fertility is declining in women under 30 years of age, and increasing for women aged 30 to 44 years (see age specific fertility rates).

Live Births

- Live births continue to decline in Alberta in spite of population increases, resulting in a further decrease in the crude birth rate in 2000. The crude birth rate in 2000 was 12.3 (live births per 1,000 population).

Birth Weight

- The Alberta low birth weight rate has been stable for several years, and was 6.1 (per 100 live births) in 2000.
- Low birth weight rates are elevated for pre-term births, multiple births and births to teenagers and older mothers.
- Small for gestation age rates showed a decreasing trend from 1986 to 2000, and the 2000 rate of 7.9 (per 100 live singleton births) was the fifteen-year low.
- In 2000, 12.9 out of every 100 liveborn infants weighed more than 4,000 grams.
  - High birth weight babies were most likely to be born to mothers over 25 years of age.
- The large for gestational age rate was 12.3 (per 100 live singleton births) in 2000; this rate increased over the fifteen-year study period.

Pre-term Births

- The pre-term birth rate (per 100 live births) reached a new high of 8.5 in 2000.
  - Prematurity is strongly associated with negative birth outcomes, and this rate is of concern.
  - Pre-term births are often also low birth weight births and/or multiple births.
  - Teenage mothers and mothers aged 35 and over are at greater risk for pre-term birth.

Multiple Births

- Multiple births are increasingly common, with a 2000 rate of 3.0.
  - Multiple birth frequency increases linearly with increasing maternal age.
  - The majority of mutiple births are low birth weight and/or pre-term.

Infant Morbidity

- Infant morbidity rates are generally low in Alberta.
  - The rate of respiratory distress syndrome was 1.2 (per 100 hospital deliveries) in 1999 and 2000 combined.

- Congenital anomalies occurred in 34.3 out of every 1,000 total births in Alberta in 2000; the rate of congenital anomalies decreased during the fifteen years from 1986 to 2000.
  - Mothers aged 35 and older are at greater risk of having an infant with a congenital anomaly.

Mortality

Stillbirths

- The rate of stillbirth was 6.5 (per 1,000 total births) in 2000; this rate did not vary systematically over the fifteen-year study period.
  - Stillbirths are more common for teenage mothers and mothers aged 35 and older.
  - Most stillbirths are low birth weight and/or pre-term.
  - Multiple pregnancies are much more likely to end in one or more stillbirths than singleton pregnancies.

Perinatal and Neonatal Mortality

- The perinatal mortality rate for 2000 was 9.7 (per 1,000 total births).
- The neonatal mortality rate (per 1,000 live births) was 4.1 in 2000.
  - Perinatal and neonatal deaths decrease markedly with increasing birth weight and gestational age.
  - Overall perinatal and neonatal mortality rates, corrected for congenital anomalies, increase with increasing maternal age.
  - Low birth weight, prematurity, and congenital anomalies are strong predictors of perinatal and neonatal deaths.

Post-Neonatal Mortality

- The post-neonatal mortality rate for 2000 was 2.4 (per 1,000 live births).
  - This rate was at its highest point since 1994 in 2000.

Infant Mortality

- Infant mortality declined over the fifteen-year study period, although the 2000 rate of 6.5 (per 1,000 live births) was the highest in several years. This statistic will be carefully monitored to determine whether the 2000 rate was anomalous, or a trend is developing.
  - Infant mortalities are more common in male infants than in female infants (the rates were 7.5 and 5.5, respectively, in 2000).

Maternal Mortality

- The maternal mortality rate is low in Alberta, and has decreased significantly over time.

- There was one maternal death in 1999 and there were no maternal deaths in 2000 reported to medical records departments in Alberta. The 1999 maternal death was classified as unrelated. This means that the death was not related to pregnancy, childbirth, or puerperium, but occurred within the 90-day post-delivery time frame.

Maternal Factors

Number of Live Births to Mothers

- Data on number of live births to a mother appear in this report for the first time.
  - In 2000, 42.2% of live births were first live births, 34.1% were second live births, 14.8% were third live births, and the remaining 8.8% were fourth or later live births.
  - Over the time period 1986 to 2000, there was a small significant decrease in the proportion of second and third live births, accompanied by a small significant increase in proportion of first births, indicating a downward shift in number of live births per mother.
  - First live births are more likely to result in small and/or pre-term infants than are second live births.

Maternal Postnatal Morbidity

- Maternal postnatal morbidity data are new to this report this year.
  - The incidence of shoulder dystocia for 1999 and 2000 combined was 3.3 (per 100 hospital deliveries).
  - Postpartum hemorrhage occurred in 16.5 out of every 100 hospital deliveries in 1999 and 2000 combined data.
  - Depression was a common occurrence in postpartum women in 1999 and 2000 combined, with incidence of 12.8% in the first year after giving birth and 16.7% in the first twenty-four months postpartum.
    - The depression rate for mothers prior to pregnancy was 2.5%.

Maternal Postnatal Behaviours

- Breastfeeding initiation rates are quite high in Alberta, with 86.6% of women giving birth in hospitals breastfeeding at the point of discharge in 2000.
  - This rate showed a small increase from 1996 to 2000.

For further information on any aspect of the report, please contact the Health Surveillance Branch of Alberta Health and Wellness, or the Alberta Medical Association Committee on Reproductive Care.

Executive Summary

Introduction

This document signifies continued successful collaboration between Alberta Health and Wellness and the Alberta Medical Association in reporting on the reproductive health of Albertans. This year, the Northern and Central Alberta Perinatal Outreach Program and the Southern Alberta Perinatal Outreach Program also participated in this collaborative effort by providing data on maternal morbidity for the report.

Contents

Data consist of pregnancy and birth data for the calendar years 1986 to 2000, including:

- spontaneous abortions
- induced abortions
- operative deliveries and induction of labour
- epidurals in labour (1998 to 2000 only)
- maternal age
- maternal prenatal morbidity (1999 and 2000 only)
- maternal prenatal behaviours (1998 to 2000 only)
- live births
- birth weight
- pre-term births
- multiple pregnancies and births
- infant morbidity (1999 and 2000 only)
- stillbirths
- perinatal, neonatal, and infant mortality
- maternal mortality
- number of live births to mothers
- maternal postnatal morbidity (1999 and 2000 only)
- maternal postnatal behaviours (i.e., breastfeeding initiation)

Data Sources

- Vital Statistics Birth Registration files, Department of Government Services
- Vital Statistics Death Registration files, Department of Government Services
- Clinic Files, Alberta Health and Wellness
- Canadian Institute of Health Information Inpatient Files, Alberta Health and Wellness
- Fee-for-Service Claims Files, Alberta Health and Wellness
- Ambulatory Care Classification System, Alberta Health and Wellness
- Alberta Congenital Anomalies Surveillance System

- Alberta Health Care Insurance Plan Stakeholder Registration File, Alberta Health and Wellness
- Alberta Medical Association Committee on Reproductive Care
- Reports from follow-up clinics for neonates and infants
- Northern and Central Alberta Perinatal Outreach Program
- Southern Alberta Perinatal Outreach Program
- Statistics Canada and Health Canada publications

Methodology and Limitations

- Only Alberta residents are included in analyses unless otherwise stated.
- Regional data (by regional health authorities) are provided where appropriate. Some data are broken down by relevant factors such as maternal age or birth weight groupings.
- National comparisons are made where possible. At the time of preparation of this document, national data were available to the end of 1999.
  - National data are extracted from Statistics Canada and Health Canada publications on births, therapeutic abortions, deaths, and population.
- Statistical analyses are mainly descriptive, including frequencies, rates, percentages, means and medians. Regional differences are interpreted in terms of standard errors and confidence intervals.
- With rare events (e.g., stillbirths) or detailed break-downs (e.g., live births by age group of mother, RHA, and year), rates may be based on small numbers, which reduces their statistical reliability. Caution should always be exercised in interpreting these rates.
- Data are often combined across three-year periods (e.g., 1998 to 2000) in order to increase reliability of rates.
- In some cases, linear, quadratic, and cubic effects are described. Linear effects refer to a straight-line relationship between two variables (either an increasing or a decreasing trend). Quadratic and cubic effects are non-linear: The relationship between two variables in this case is captured by a second-order (quadratic) or third-order (cubic) polynomial. A quadratic function results in a curve with one change of direction, for example a decrease followed by an increase (a U-shaped curve). A cubic function results in a curve with two changes of direction, for example an increase, followed by a decrease, followed by an increase.
- Birth statistics are derived from Vital Statistics Birth Registration Files. Registration of births in Alberta is a legal requirement, and the files are believed to be virtually complete. Births to non-Alberta residents occurring in Alberta have been excluded.
- Extracting maternal and infant morbidity data from health records is a challenging task, and the analyses reported here are exploratory in nature. To maximize capture of cases, we extracted diagnostic information from

three data sources: Fee-For-Service Claims, Ambulatory Care Classification System, and Inpatient Hospital Morbidity files. The first three diagnoses for each case were checked, and each case was counted only once in a year for a given diagnosis.

  - Many more maternal and infant conditions than those reported on here were studied in preliminary analyses. The final variable selections were based on a number of considerations, primarily data reliability and expert consultation.

- Information on post-neonatal and infant deaths is derived from Vital Statistics Death Registration Files. Registration of deaths in Alberta is a legal requirement, and the files are believed to be virtually complete. Deaths to non-Alberta residents occurring in Alberta have been excluded.
- Populations used for the calculations of rates are derived from the Alberta Health Care Insurance Plan Registration Files. They are estimated at June 30, as viewed at December 31 of each year. Provincial rate calculations include those with an "unknown" RHA code.
  - Population figures used in calculations in this report are in Tables A102 and A103.
- Because of differences in definitions and dates of extracting data for analyses, the statistics in this report may not be exactly the same as those previously published by Alberta Health and Wellness.

Time Trends for Major Indicators of Reproductive Health

- The table below summarizes time trends for selected major indicators of reproductive health for the fifteen-year period from 1986 to 2000.
- Included are 2000 rates, the lowest rate for the fifteen-year period (with the year in which the lowest rate occurred in parentheses), the highest rate (year in parentheses), and the linear trend that applies from 1986 to 2000.

Indicator	2000 Rate	Lowest Rate (Year)	Highest Rate (Year)	Linear Trend[1]
Induced Abortion Rate (per 1,000 women aged 15-49	13.0	8.0 (87)	13.6 (97)	Increasing
Total Induction Rate (per 100 hospital deliveries)	25.9	12.0 (88)	25.9 (00)	Increasing
Cesarean Section Rate (per 100 hospital deliveries)	20.2	15.7 (94)	20.2 (00)	No trend
Mean Maternal Age at Delivery	28.3	26.7 (86)	28.3 (00)	Increasing
General Fertility Rate (per 1,000 women aged 15-49)	45.6	45.6 (00)	63.6 (86)	Decreasing
Total Fertility Rate (per 1,000 women)	1,660	1,660 (00)	1,876 (89)	Decreasing
Crude Birth Rate (per 1,000 population)	12.3	12.3 (00)	17.7 (86)	Decreasing
Low Birth Weight Rate (per 100 live births)	6.1	5.5 (86, 87)	6.2 (97,98)	Increasing
High Birth Weight Rate (per 100 live births)	12.9	10.7 (88)	12.9 (00)	Increasing
Pre-Term Birth Rate (per 100 live births)	8.5	6.3 (86)	8.5 (00)	Increasing
Multiple Birth Rate (per 100 live births)	3.0	1.9 (86)	3.0 (00)	Increasing
Congenital Anomalies Rate	34.3	31.1 (99)	48.5(90)	Decreasing
Stillbirth Rate (per 1,000 total births)	6.5	5.0 (98)	7.3 (91)	No trend
Perinatal Mortality rate (per 1,000 total births)	9.7	7.7 (98)	10.8 (90,95)	No trend
Neonatal Mortality Rate (per 1,000 live births)	4.1	3.4 (91,98)	5.0 (90)	No trend
Post-Neonatal Mortality Rate (per 1,000 live births)	2.4	1.4 (97)	4.0 (86)	Decreasing
Infant Mortality Rate (per 1,000 live births)	6.5	4.9 (97)	8.9 (86)	Decreasing

Sources: Vital Statistics, Birth File, Department of Government Services, January 2002 release.
Vital Statistics, Death File, Department of Government Services, May 2001 release.
Vital Statistics, Stillbirth File, Department of Government Services, January 2002 release.
Clinics Files, Alberta Health and Wellness.
Fee-for-Services Claims Files, Alberta Health and Wellness.
Canadian Institute of Health Information Inpatient Files, Alberta Health and Wellness.
Alberta Congenital Anomalies Surveillance System, 1980-99, November 2000 release.
Alberta Health Care Insurance Plan Registration File, Alberta Health and Wellness.

Note: 1. Trend refers to whether a statistically significant linear trend is present in the data. Populations are estimated at June 30, as viewed at December 31 of each year.
2. Note that mortality rates reported here are derived from Vital Statistics databases. The figures may differ somewhat from those reported by the AMA Committee on Reproductive Care due to differences in data sources.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

National Comparisons

- Shown in the table below are national and provincial comparisons of selected major indicators for 1999 (the most recent year for which comprehensive national data are available).

Indicator	Canada	Alberta
Induced Abortion Rate (per 1,000 women aged 15-44)	16.1	14.8
Cesarean Section Rate (per 100 hospital deliveries)	19.2[1]	19.1
Mean Maternal Age at Delivery (years)	28.7	28.2
General Fertility Rate (per 1,000 women aged 15-49)	42.3	47.7
Total Fertility Rate (per 1,000 women)	1,527	1,717
Crude Birth Rate (per 1,000 population)	11.1	12.9
Low Birth Weight Rate (per 100 live births)	5.6	5.9
High Birth Weight Rate (per 100 live births)	13.3	12.6
Pre-Term Birth Rate (per 100 live births)	7.3	7.8
Multiple Birth Rate (per 100 live births)	2.7	2.7
Stillbirth Rate (per 1,000 total births)	6.1	6.8
Perinatal Mortality rate (per 1,000 total births)	9.1	9.9
Neonatal Mortality Rate (per 1,000 live births)	3.6	3.7
Post-Neonatal Mortality Rate (per 1,000 live births)	1.6	2.0
Infant Mortality Rate (per 1,000 live births)	5.3	5.8

Sources:

Vital Statistics, Birth File, Department of Government Services, January 2002 release.
Vital Statistics, Death File, Department of Government Services, May 2001 release.
Vital Statistics, Stillbirth File, Department of Government Services, January 2002 relea
Clinics Files, Alberta Health and Wellness.
Fee-for-Services Claims Files, Alberta Health and Wellness.
Canadian Institute of Health Information Inpatient Files, Alberta Health and Wellness.
Alberta Health Care Insurance Plan Registration File, Alberta Health and Wellness.
Births and Deaths (Shelf Tables), 1999, Statistics Canada
http://www.statcan.ca/english/Pgdb/People/Health/health41a.htm (Canadian induced abortions)
http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=statistics_results_topic_pregna_e&cw_topic=Health%20Conditions&cw_subtopic=Pregnancy%20and%20Childbir (Canadian cesarean sections)

Notes:

1. Canadian cesarean section rate is for 1998/99 fiscal year.
Populations are estimated at June 30, as viewed at December 31 of each year.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Pregnancies

Estimated pregnancies

Definitions

- An ***estimate of total pregnancies*** in the province in a given time period can be obtained by summing live births, stillbirths, spontaneous abortions, and induced abortions in that period.
  - ***Estimated pregnancy rate***: Number of estimated pregnancies per 1,000 women between 15 and 49 years of age.

Background

- Accurate pregnancy estimates, while providing valuable information, are difficult to obtain. Live births, stillbirths, and induced abortions are virtually completely reported in Alberta. Spontaneous abortions that are not recognized or have not been reported to physicians cannot be accounted for, however.
  - Pregnancy estimates in this report include only spontaneous abortions for which a physician claim has been made. Pregnancies are therefore underestimated.
- Total number of spontaneous abortions can be estimated from numerous sources, including survey data, fetal life tables, or clinical studies in which human chorionic gonadotropin levels are sampled. By these methods, up to 30% of clinically recognized pregnancies are estimated to end in spontaneous abortion (Hammerslough, 1992; The Alan Guttmacher Institute, 2000; Ventura, Curtin, & Mathews, 2000; Zinaman, Clegg, Brown, O'Connor, & Selevan, 1996).
  - Approximately 9% of the estimated pregnancies reported below for Alberta from 1986 to 2000 ended in spontaneous abortion. Based on the studies cited above, up to 20% more of the estimated pregnancies may have ended prior to being clinically recognized or without treatment by a physician.

Data Sources

- Live births: Vital Statistics Birth Registration files, Department of Government Services, January 2002 Release.
- Stillbirths: Vital Statistics Stillbirth Registration files, Department of Government Services, January 2002 Release.
- Spontaneous abortions: Fee-for-Service Claims Files, Alberta Health and Wellness.
- Other induced abortions: Clinic Files, Alberta Health and Wellness.
- Hospital induced abortions: Fee-for-Service Claims Files, Alberta Health and Wellness.
- Population estimates: Alberta Health Care Insurance Plan Stakeholder Registration File, Alberta Health and Wellness.

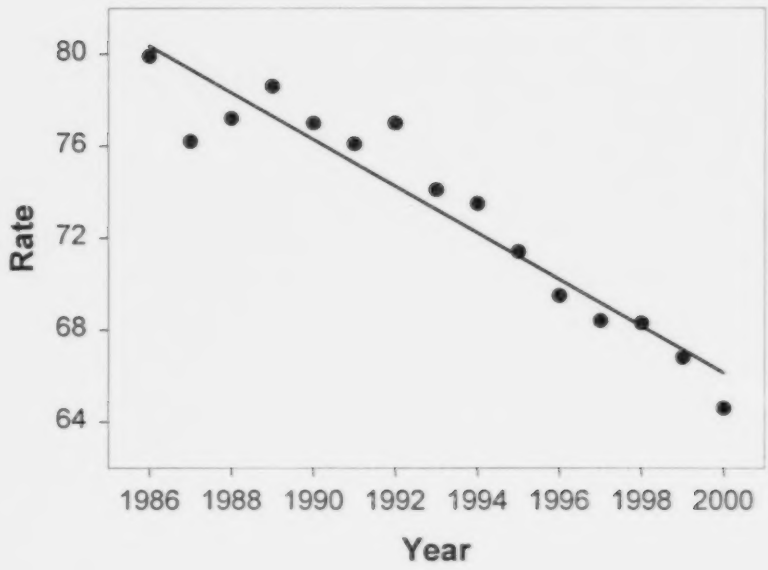
Estimated Pregnancies

Estimated Pregnancies Trends and Effects

- There were 51,851 **estimated pregnancies** in Alberta in 2000.
- The **estimated pregnancy rate** (per 1,000 women aged 15-49) was 64.6 in 2000, which is the lowest rate in the fifteen-year period covered by this report (see Table A1 and Figure 1).
- Table A2 contains data on estimated pregnancy rates broken down by **maternal age** group. The estimated pregnancy rate for women aged 15 to 17 showed a significant linear decrease between 1986 and 2000. For all age groups of women between 18 and 30, significant quadratic trends (in the shape of an inverted U) occurred for estimated pregnancy rates. That is, estimated pregnancy rates for women under thirty were relatively lower in the late 1980's, peaked in the early to mid 1990's, and have declined since. For women between 30 and 44 years, however, estimated pregnancy rates have shown significant *increasing* linear trends over the fifteen-year study period.
  - Women aged 25-29 years continue to have the highest pregnancy rates of all age groups. Women aged 20-24 and 30-34 now have virtually equal pregnancy rates; historically, women aged 20-24 had higher pregnancy rates than women aged 30 –34. Women aged 20 to 34 years had 75.4% of the estimated pregnancies in Alberta in 2000.
- For 1998 to 2000 combined, 71.0% of estimated pregnancies ended in live birth.
  - This percentage varied dramatically with maternal age. As shown in Figure 2, there is a significant quadratic effect of maternal age group on **percentage of estimated pregnancies ending in live birth**, with the youngest and oldest age groups having the lowest percentages.
    - For women under 15, only 28.8% of estimated pregnancies ended in live birth between 1998 and 2000; this is the lowest percentage of all age groups.
    - Women aged 30 to 34 were most likely to have a pregnancy end in a live birth, with 80.4% of estimated pregnancies in this age group ending in live births.
- Estimated pregnancy rates by **residence RHA** appear in Table A3. Estimated pregnancy rates for 1998 to 2000 combined were significantly higher than the provincial average in RHAs 1, 6, 9, 12, 13, 14, 15, and 17, and significantly lower than the provincial average in RHAs 3, 5, 7 ,8 and 10 (see Map 1).
  - Estimated pregnancy rates by residence RHA and maternal age group are documented in Table A4. Rates for women over 44 years of age *must be interpreted with caution* due to the low number of cases in this age group (indeed, many RHAs had no estimated pregnancies in this age group).

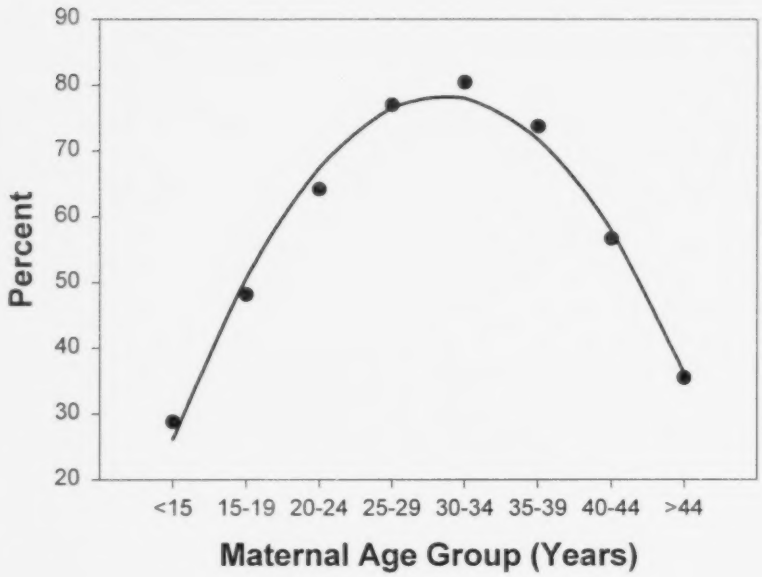
Estimated Pregnancies

Figure 1.
Estimated Pregnancy Rate
(per 1,000 women aged 15-49),
Alberta, 1986 - 2000



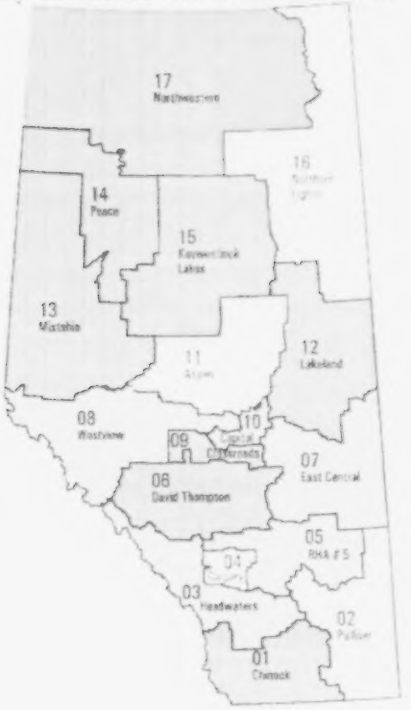
Estimated Pregnancies

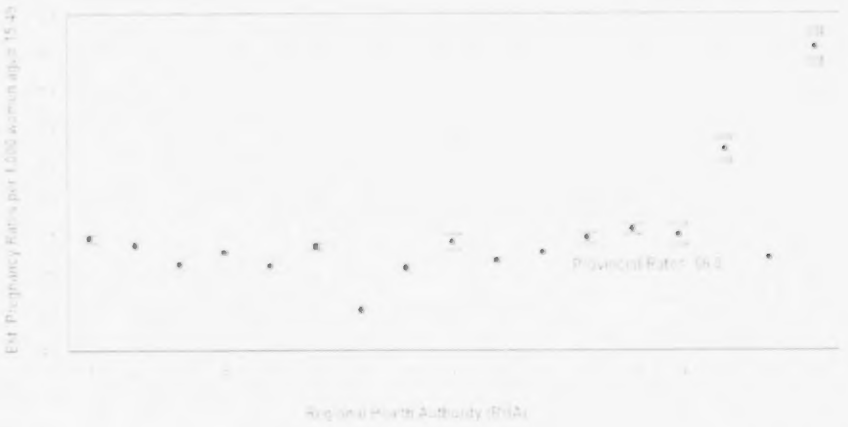
Figure 2.
Percent of Estimated Pregnancies
Ending in Live Birth,
Alberta, 1998 - 2000 Combined



Estimated Pregnancies

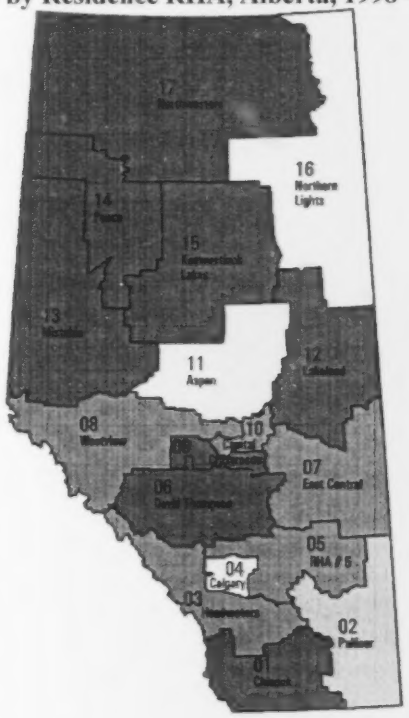
Map 1. Estimated Pregnancy Rates (per 1,000 women aged 15-49) by Residence RHA, Alberta, 1998 – 2000 Combined.

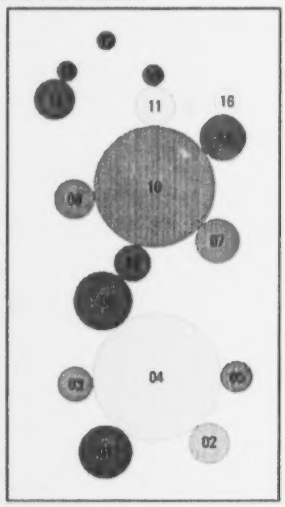


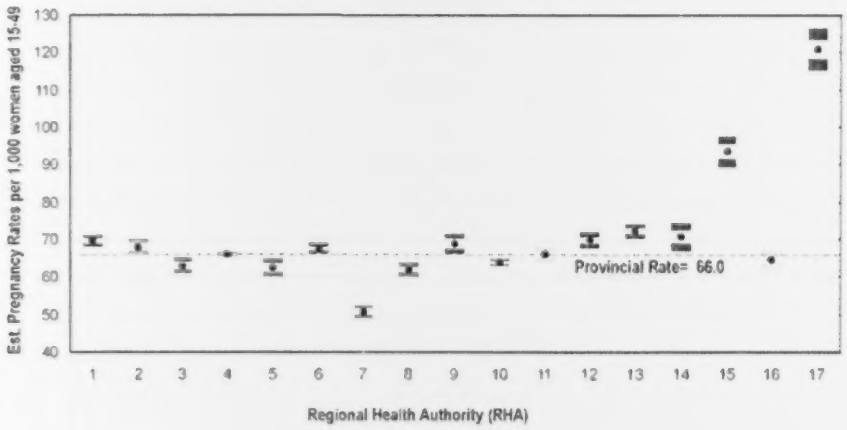


Estimated Pregnancies

Map 1. Estimated Pregnancy Rates (per 1,000 women aged 15-49) by Residence RHA, Alberta, 1998 – 2000 Combined.







Spontaneous Abortions

Definitions

- ***Spontaneous abortion***: Naturally occurring premature expulsion from the uterus of the products of conception – of the embryo, or of a nonviable fetus (Dorland, 2000). Also commonly referred to as miscarriage. In Alberta, the legal definition of spontaneous abortions refers to those occurring prior to 20 weeks gestation.
  - Included in this category are clinical spontaneous abortions treated by physicians, excluding unreported or undetected spontaneous abortions. Although the true number of spontaneous abortions is underestimated (see Estimated Pregnancies section), the data nevertheless allow approximation of time trends and maternal age effects.
  - For repeat spontaneous abortions, a two-month time lag between physician visits was used as the cutoff point for separate pregnancy events.
- ***Spontaneous abortion rate***: Number of spontaneous abortions treated by physicians per 1,000 women aged 15-49, or per 100 estimated pregnancies.

Background

- The incidence of spontaneous abortion increases substantially with maternal age.
  - Spontaneous abortion rates in clinically recognized pregnancies for mothers under 30 years of age have been estimated to be in the 10% range, while rates for mothers over 35 have been estimated in the 26% to 28% range (Goldhaber, Fireman, Saraiya, & Berg, 2000; Saraiya, Berg, Shulman, Green, & Atrash, 1999). Note that these estimates do not incorporate adjustment for spontaneous abortions that may have occurred in pregnancies that ended in induced abortions.
- More than half of spontaneous abortions result from chromosomal abnormalities (Reindollar, 2000).
- Recurrent spontaneous abortion is rare; it has been associated with parental chromosomal abnormalities, antiphospholipid syndrome (an autoimmune disease), polycystic ovarian disease, and maternal age over 40 years (Reindollar, 2000).

Data Sources

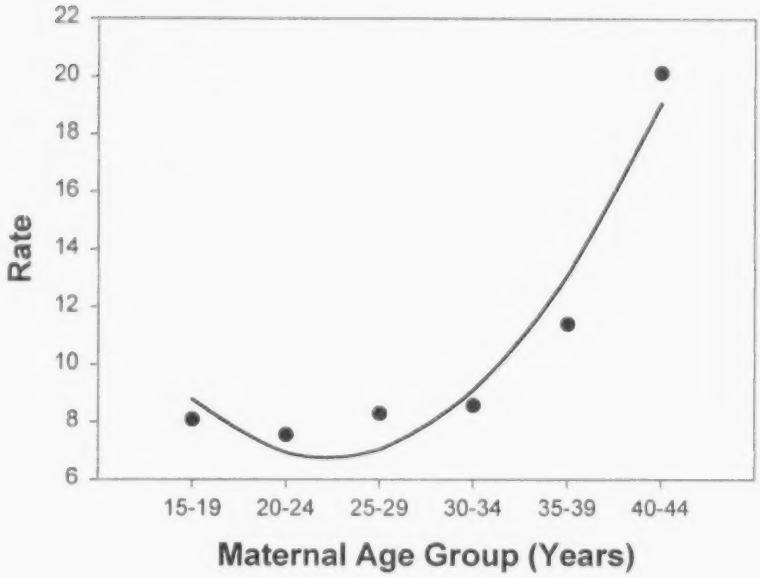
- Spontaneous abortions: Fee-for-Service Claims Files, Alberta Health and Wellness.
- Population estimates: Alberta Health Care Insurance Plan Stakeholder Registration File, Alberta Health and Wellness.

Spontaneous Abortions

Spontaneous Abortions Trends and Effects

- The **spontaneous abortion rate (per 1,000 women aged 15-49)** has declined in concert with declining fertility rates over the last several years (see Table A1). The 2000 rate was 5.7.
- The **spontaneous abortion rate (per 100 estimated pregnancies)** follows no linear time trend (see Table A1). The 2000 rate was 8.8.
- Spontaneous abortion rates vary with **maternal age** group (see Table A5). Note that rates for women under 15 and over 44 years are not reliable due to low numbers of spontaneous abortions in these age groups; *these rates must be interpreted with caution.*
  - Not surprisingly, the rate (per 1,000 women aged 15-49) is highest for women aged 20 to 34, who have the highest number of pregnancies.
  - The rate (per 100 estimated pregnancies) is stable across maternal age for women under 35, increases somewhat for women aged 35-39, and then increases considerably for women over 39. For the 40-44 age group, 18.7% of estimated pregnancies ended in clinically-recognized spontaneous abortion in 2000 (see Figure 3 for these data for 1998 to 2000 combined).
- Spontaneous abortion rates by **residence RHA** are shown in Table A6.

Figure 3.
Spontaneous Abortion Rate
(per 100 estimated pregnancies)
by Maternal Age Group,
Alberta, 1998 - 2000 Combined



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Induced Abortions

Definitions

- ***Induced abortion***: Intentional premature expulsion from the uterus of the products of conception – of the embryo, or of a nonviable fetus (Dorland, 2000). Also commonly referred to as therapeutic abortion.
  - ***Induced abortion rate***: Number of induced abortions per 1,000 women aged 15-49, or per 100 estimated pregnancies.
  - ***Age-specific induced abortion rate***: Number of induced abortions per 1,000 women in a given age group.

Background

- Induced abortions came under the control of the Criminal Code in a in 1969. Private clinics became legal in 1988 after a Supreme Court decision struck down the 1969 law (Wadhera & Millar, 1996).
- Private abortion clinics opened in Alberta in 1991. In 1996, private abortion clinics became fully funded by RHAs.
- In **Canada** in 1999, there were 15.5 abortions for every 1,000 women aged 15 to 44 (Statistics Canada, 2002a); the Alberta rate for women aged 15 to 44 in 1999 was 14.8.
  - One-third of induced abortions in **Canada** in 1999 occurred in clinics (Statistics Canada, 2002a); 41.9% of induced abortions in Alberta occurred in clinics in 1999.

Data Sources

- Hospital induced abortions: Fee-for-Service Claims Files, Alberta Health and Wellness
- Clinic induced abortions: Clinic Files, Alberta Health and Wellness
- Regional comparisons are provided from both facility and residence perspectives. However, because region of residence information is not available in the Clinic Files, it is extracted from Fee-for-Service Claims files and data may not correspond exactly due to data source differences.
- Population estimates: Alberta Health Care Insurance Plan Stakeholder Registration File, Alberta Health and Wellness

Induced Abortions Trends and Effects

- The **induced abortion rate** (per 1,000 women between 15 and 49 years of age) was 13.0 for 2000 (see Table A1). While there was a significant linear increase in the induced abortion rate over the fifteen-year study period, the rate peaked in 1996 and has declined slightly since then.
- The **induced abortion rate** (per 100 estimated pregnancies) was 20.1 in 2000 (see Table A1). This rate increased between 1986 and 2000 (see Figure 4).
- Women between 18 and 24 years of age continue to have the highest induced abortion rates of all age groups. See Table A7 **for age-specific induced abortion rates**. Note that the age-specific rates for women over 44 are *too unreliable to interpret*, due to low numbers of induced abortions in this age group.
  - The **age-specific induced abortion rate (per 1,000 women in each age group)** for women younger than 15 follows a quadratic trend over the 15-year study period, with rates peaking between 1992 and 1995 and declining since.
    - The rate for women aged 15 to 19 was 20.5 in 2000, which is the lowest rate for this age group since private clinics opened in 1991.
    - The induced abortion rate for 20 to 29 year olds has been relatively stable over the last several years, while still showing an overall increasing trend from 1986 to 2000.
    - The rate for 30 to 44 year old women is increasing, in tandem with increasing pregnancy rates for women in this age group.
  - The **age-specific induced abortion rate (per 100 estimated pregnancies)** has increased over time for all age groups of women under 40; for women aged 40 to 44, there is no reliable trend. Women under the age of 25 have the highest proportion (out of all of the age groups) of pregnancies that end with induced abortion.
- In 2000, **private clinics** performed 43.4% of induced abortions, with the remainder occurring in hospitals (see Table A8).
- Only 2.9% of induced abortions were performed outside of Edmonton or Calgary in 2000 (see Table A9).
  - 43.0% of induced abortions were performed in Edmonton and 54.1% in Calgary (see Table A9).
- A large majority of induced abortions occur within the first 12 weeks of pregnancy. In 2000, 88.1% of induced abortions occurred prior to 13 weeks **gestation**, and 11.8% occurred between 13 and 20 weeks gestation.
  - Women aged 15 to 24 are most likely to have induced abortions between 9 and 12 weeks gestation, while women aged 25 to 44 are most likely to have induced abortions at less than 9 weeks gestation (see Table A10).
  - In hospitals, the most common gestational age for induced abortions was 9 to 12 weeks, with 49.8% of induced abortions in hospitals

Reproductive Care Services

occurring in this gestational age group. In clinics, the highest frequency of induced abortions was 46.3%, occurring in the "less than 9 weeks" gestational age category (see Table A11).

- Induced abortions and induced abortion rates by **residence RHA** appear in Table A12.
  - For 1998 to 2000 combined, induced abortion rates were higher than the provincial average in RHAs 4 and 10, and lower than the provincial average in all other RHAs, with the exception of RHA 3, where rates did not differ from the provincial average.

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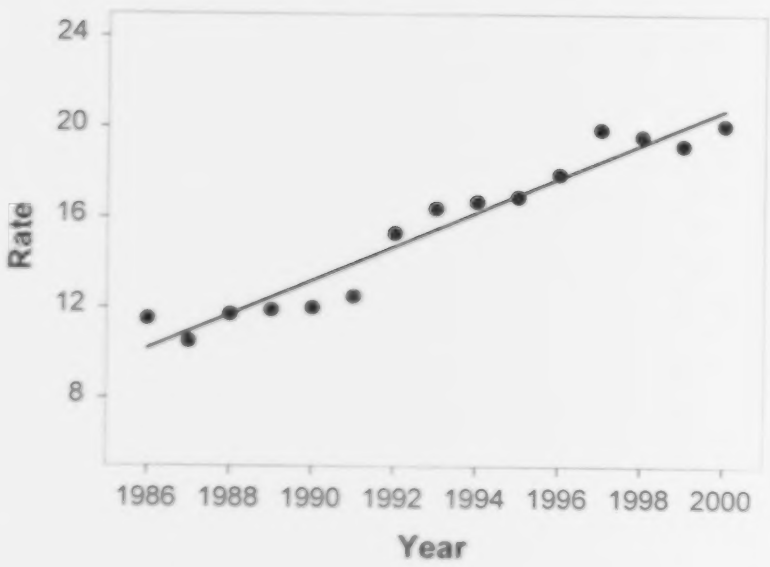
Figure 4.
Induced Abortion Rate
(per 100 estimated pregnancies),
Alberta, 1986 - 2000



Deliveries

Definitions

- ***Induced labour:*** Labour brought on by mechanical or other extraneous means (Dorland, 2000).
  - ***Medical induction***: Induction with oxytocin or prostaglandins.
  - ***Surgical induction***: Induction of labour by artificial rupture of membranes or other surgical methods.
- ***Epidural analgesia***: A method of pain relief consisting of continuous bathing of lumbar or thoracic nerve roots within the epidural space with an injected anesthetic solution (Dorland, 2000).
- ***Vaginal delivery***: Delivery of an infant through the normal openings of the uterus and vagina (Dorland, 2000).
- ***Cesarean section***: Incision through the abdominal and uterine walls for delivery of a fetus (Dorland, 2000). Also known as an abdominal delivery.
- ***Breech delivery***: Extraction of the infant from the uterus in breech presentation; i.e., when the buttocks of the fetus are presented in labour (Dorland, 2000).
- ***Forceps delivery***: Extraction of a fetus from the maternal passages by application of forceps to the child's head (Dorland, 2000).
- ***Vacuum extraction***: Use of a device, consisting of a suction cup connected to a vacuum bottle, to facilitate delivery. The suction cup is placed on the fetus' head and vacuum pressure is applied to pull the baby out of the birth canal (Morgan, 1990).
- ***Rates*** for the above procedures are per 100 hospital deliveries.

Background

- High cesarean section rates in recent decades have been a topic of concern (Millar, Nair, & Wadhera, 1996). Risk factors for both primary and secondary cesarean sections have been extensively studied in an effort to safely reduce the rate of primary cesarean sections and increase vaginal births after cesarean deliveries (e.g., Janssen, Klein, & Soolsma, 2001; Mastrobattista, 1999).
- There is ongoing debate over the use of forceps versus vacuum extraction in assisted deliveries. It appears that maternal trauma is reduced with the use of vacuum extraction relative to forceps delivery, but that certain types of neonatal injury may be more common with vacuum extraction (Putta & Spencer, 2000; Wen, Liu, Kramer, Marcouz, Ohlsson, Sauve, & Liston, 2001; see also Buekens, 2001).

Data Sources

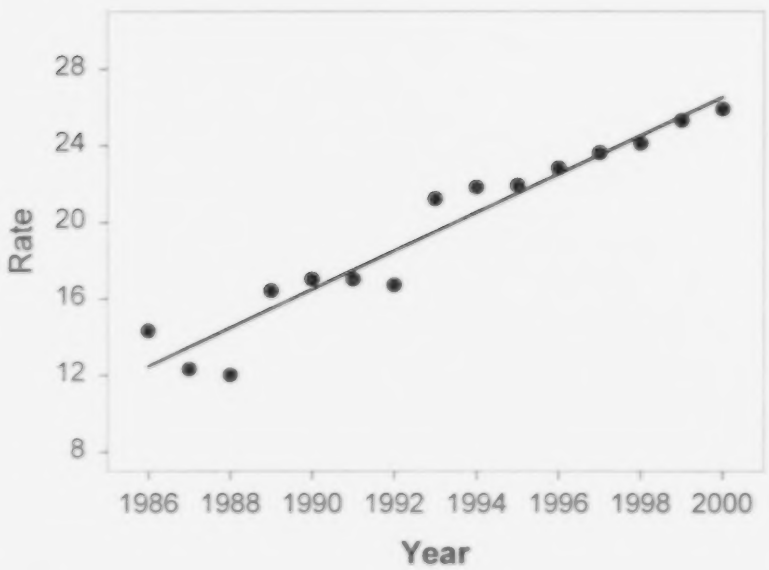
- Inductions, cesarean sections, forceps deliveries, and vacuum extractions: Canadian Institute of Health Information Inpatient Files, Alberta Health and Wellness.
  - Rates are calculated based on hospital deliveries only; home deliveries are not included in total deliveries in this section. Because only primary, secondary, and tertiary ICD9-CM diagnostic and procedure codes were available from 1985 to 1992, the diagnostic and procedure criteria for all years were based on the first three codes only. Thus, the number of procedures (especially minor procedures) may be under-counted. Detailed criteria for data extraction are provided under relevant tables and in Appendix 2.
- Epidural analgesia, cesarean section, and breech delivery data: Alberta Medical Association Committee on Reproductive Care.

Deliveries Trends and Effects: Type of Labour

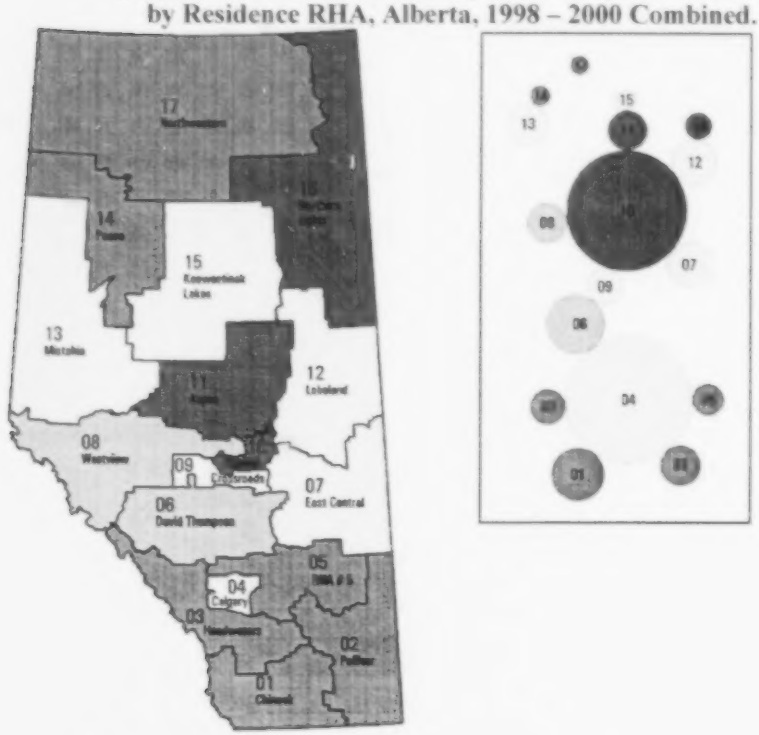
- In 2000, 74.1% of hospital deliveries occurred after spontaneous labours.
- The **total induction** rate (per 100 hospital deliveries) was 25.9 in 2000. Induction rates have climbed steadily since 1988 (see Table A13 and Figure 5).
  - Most induced labours were **medical inductions**. The medical induction rate was 20.0 in 2000, which is the highest rate since 1986.
  - **Surgical induction** rates peaked in 1993 and 1994, and reached their lowest rate since 1986 in 2000; the 2000 surgical induction rate was 1.5.
  - **Combined inductions** occurred in 4.5% of hospital deliveries in 2000
- Induction rates by **residence RHA** for 1998 to 2000 are in Table A14. Rates varied considerably between regions.
  - Combined data for 1998 to 2000 show that RHAs 10, 11, and 16 had higher total induction rates than the provincial average, while RHAs 1, 2, 3, 5, 14, and 17 had lower than average rates (see Map 2).

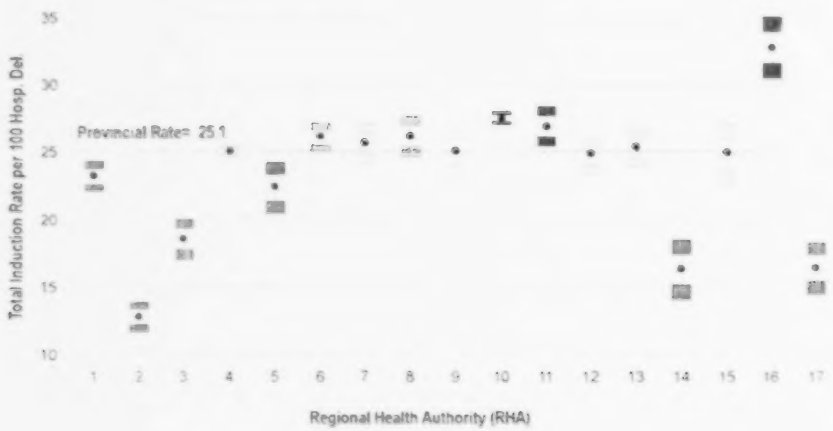
Maternal Factors

Figure 5.
Total Induction Rate
(per 100 hospital deliveries),
Alberta, 1986 - 2000



Map 2. Total Induction Rate (per 100 hospital deliveries) by Residence RHA, Alberta, 1998 – 2000 Combined.



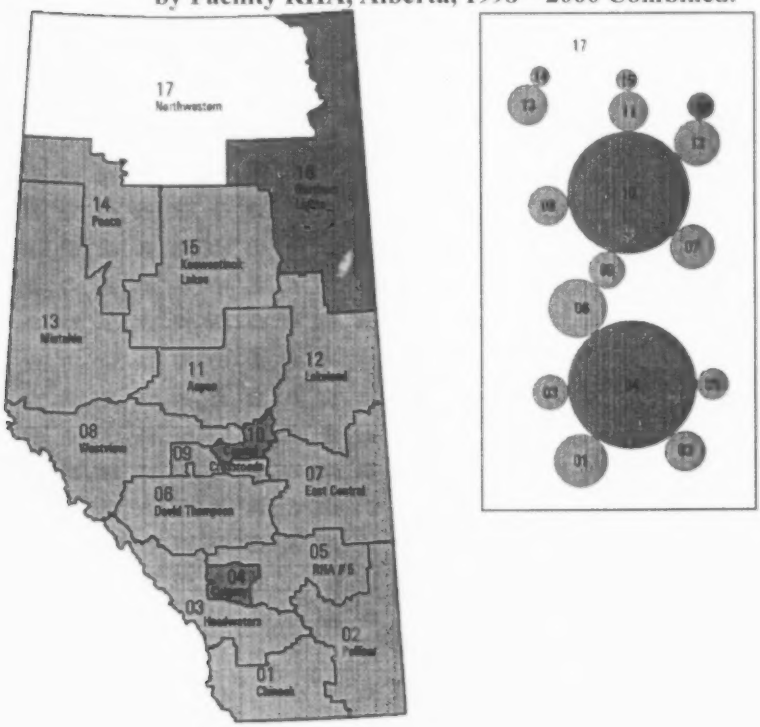


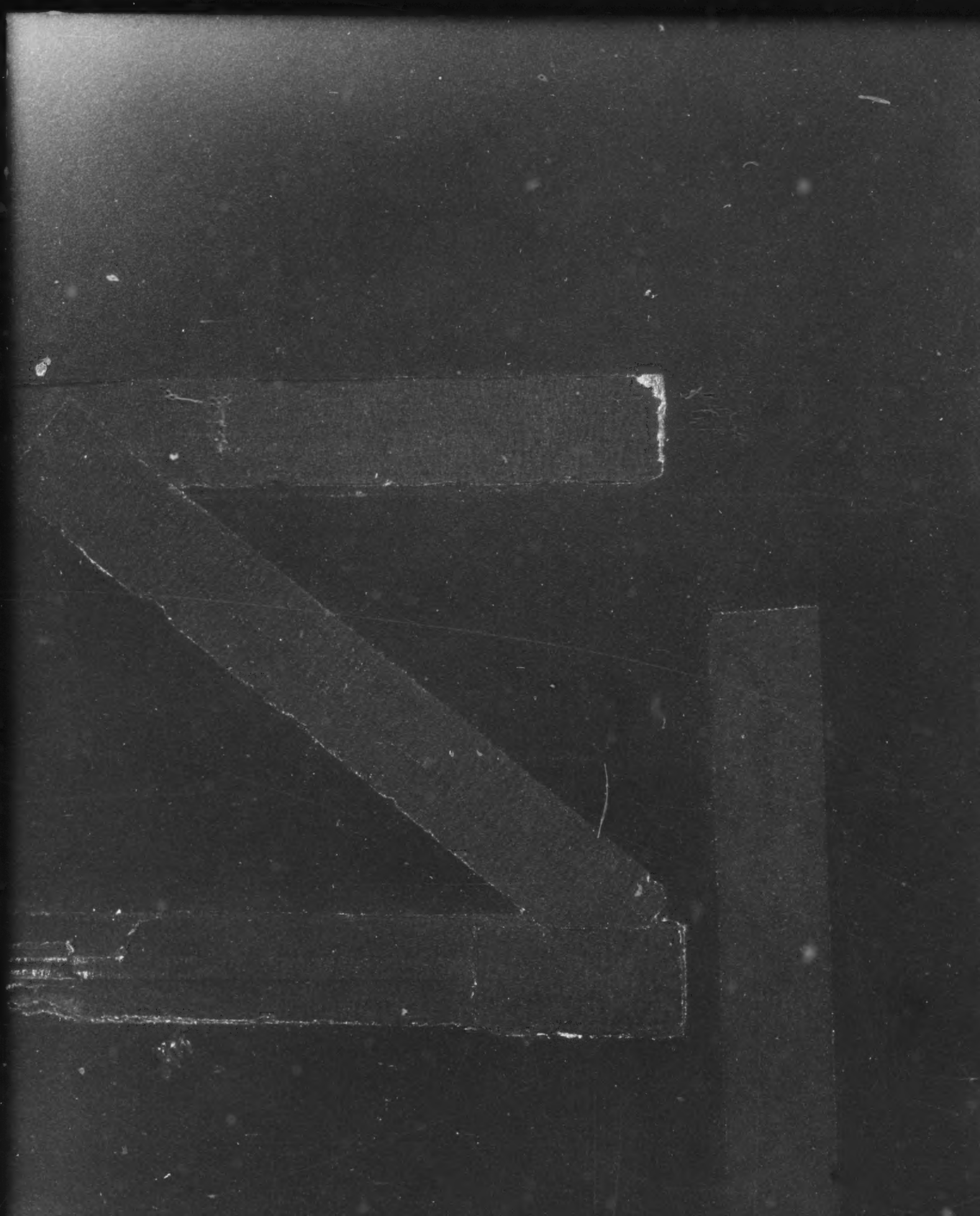
Map 2. Total Induction Rate (per 100 hospital deliveries) by Residence RHA, Alberta, 1998 – 2000 Combined.

Deliveries Trends and Effects: Epidural Analgesia

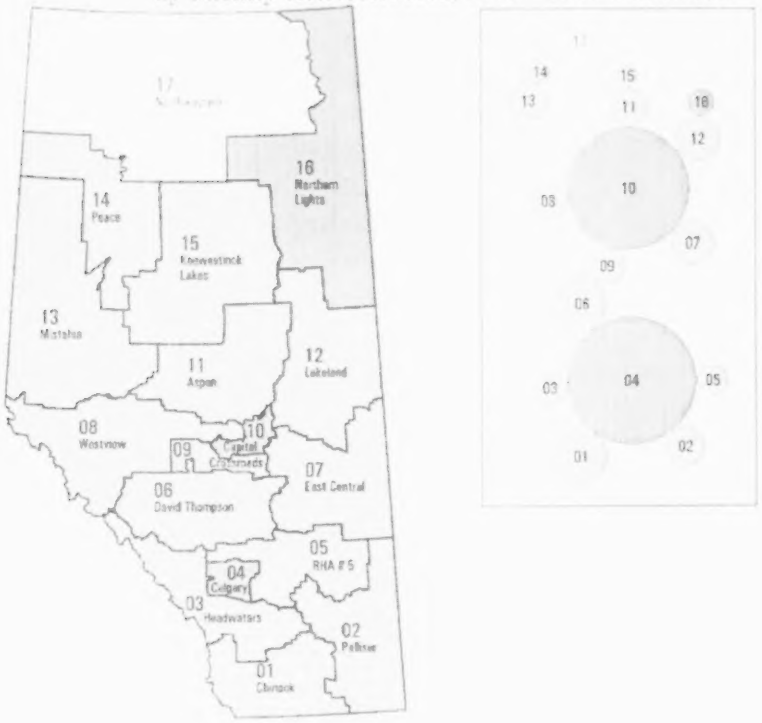
- The provincial **epidural analgesia** rate was 33.1 (per 100 hospital deliveries) in 2000.
- Table A15 shows the rates for regional health authority facilities for 1998 to 2000. The rates are quite variable; a number of regions show large differences between 1998 and 2000 rates.
  - Map 3 shows the epidural rates (per 100 pregnancies) for 2000 by **facility RHA**. The rates were higher than the provincial average in RHAs 4, 10, and 16, and lower in all other RHA's for which rates were calculated. There were no cases of epidural analgesia for labour and delivery reported in RHA 17, so no rate could be calculated.
- Table A16 shows epidural analgesia use in labour and delivery by **level of hospital** for 1998 to 2000 (see Health Canada 2000b for definition on levels of hospital care).
  - While the rate of epidural analgesia increases overall with level of hospital, there is variation within levels.

Map 3. Epidural Analgesia Rate (per 100 hospital deliveries) by Facility RHA, Alberta, 1998 – 2000 Combined.





Map 3. Epidural Analgesia Rate (per 100 hospital deliveries) by Facility RHA, Alberta, 1998 – 2000 Combined.

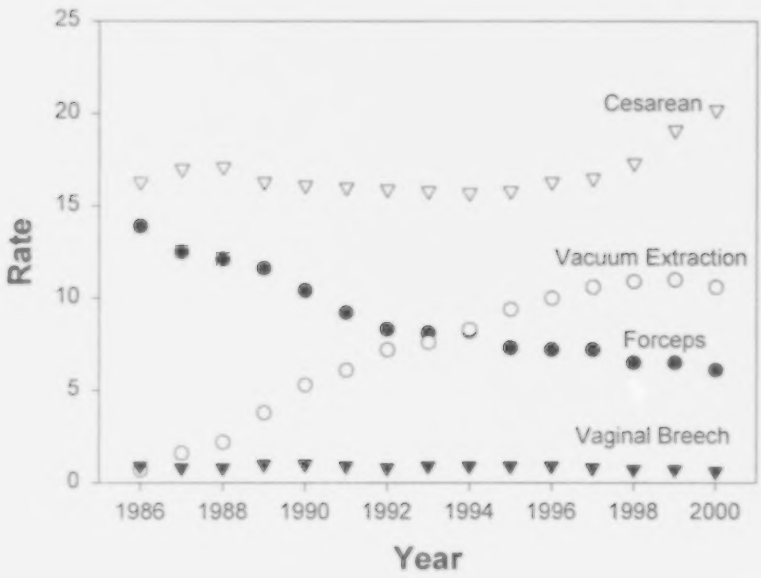


Deliveries Trends and Effects: Method of Delivery

- Rates for cesarean section, forceps, vacuum extraction, and vaginal breech deliveries are shown in Figure 6.
- The **cesarean section** rate (per 100 hospital deliveries) has increased since 1995, after a period of decrease, resulting in a significant quadratic trend over the fifteen-year study period. The rate was 20.2 in 2000, the fifteen-year high (see Table A17).
  - When data for 1998 to 2000 are combined for **residence RHAs**, cesarean rates are higher than the provincial average in RHAs 4, 6, 7, 12, 14, and 16, and lower than the provincial average in RHAs 1, 2, 8, 9, 13, and 17 (see Map 4 and Table A18).
  - Tables A19 and A20 provide detailed data for cesarean sections for each of the regional health authorities in 1999 and 2000.
    - Most cesarean sections were primary cesarean sections (67.1% in 2000).
    - Labour was attempted for 45.7% of deliveries in 2000 for mothers who had previous cesarean sections. In 2000, 75.2% of these attempted vaginal births after cesarean sections (VBAC's) were successful.
    - The perinatal and neonatal combined death rate for cesarean sections was 7.1 in 2000 (per 1,000 total births).
  - Table A21 shows the cesarean section and VBAC rates for 1992 to 2000. There has been an upturn in the repeat cesarean rate, accompanied by a decrease in trials of labour and VBAC's, over the last two years. A significant quadratic trends is present for repeat cesarean sections (rates decreased from 1992 to the mid-1990's, then increased). Trials of labour and VBACs also followed significant quadratic trends, with an opposite pattern (increasing to the mid-1990's, and decreasing since). There are no significant trends in the VBAC success rate.
- As shown in Table A17, **forceps and vacuum extraction** rates follow opposing trends. Forceps rates decreased over the fifteen-year study period, while vacuum extraction rates increased.
  - In 2000, 6.1% of deliveries were by forceps and 10.6% by vacuum extraction.
  - As shown in Table A18, forceps rates varied with **residence RHA**. Forceps rates were higher than the provincial average in RHAs 4, 10, and 16 and lower than average in RHAs 1, 2, 6, 9, 11, 12, 13, 14, 15, and 17 when data were combined for 1998 to 2000.
  - Vacuum extraction rates were higher than the provincial average in **residence RHAs** 4, 8, 10, 11, 12 and 17, and lower in RHAs 1, 2, 6, 9, 13, 15, and 16 for 1998 to 2000.

Maternal Factors

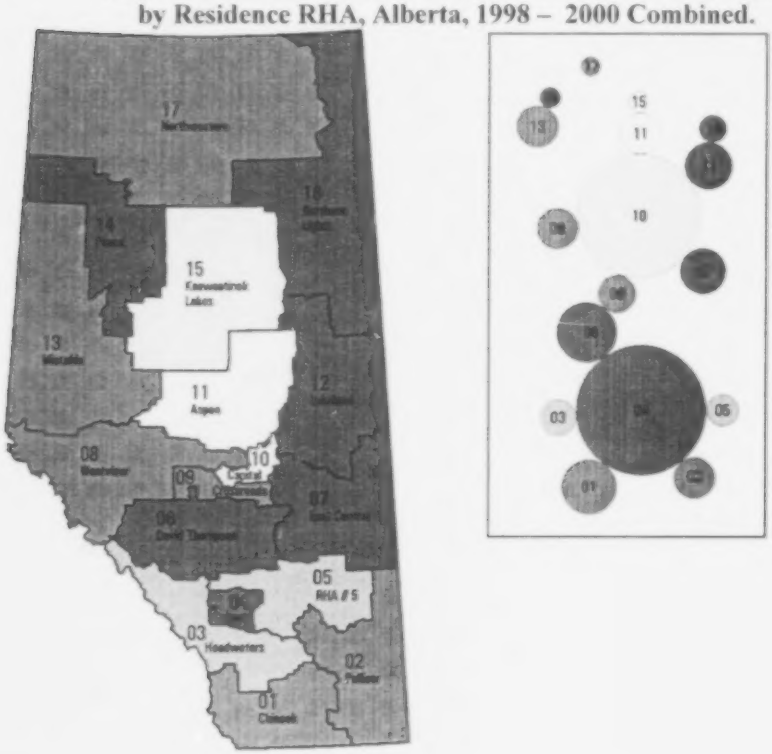
Figure 6.
Specified Types of Delivery Rates (per 100 hospital deliveries), Alberta, 1986 - 2000

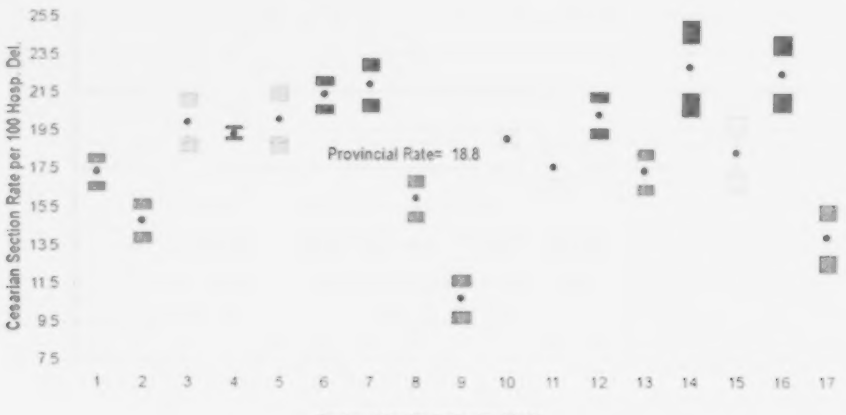


Map 4. Cesarean Section Rate (per 100 hospital deliveries) by Residence RHA, Alberta, 1998 – 2000 Combined.

Maternal Factors

Map 4. Cesarean Section Rate (per 100 hospital deliveries) by Residence RHA, Alberta, 1998 – 2000 Combined.





Deliveries Trends and Effects: Breech Deliveries

- As shown in Table A17, **vaginal breech deliveries** constituted just 0.6% of all deliveries in Alberta in 2000.
  - Table 18 provides data by **residence RHA** for vaginal breech deliveries. Vaginal breech deliveries were more common than the provincial average for 1998 to 2000 in RHA 4, and were less common than the provincial average in RHAs 11, 12, 13, 14, 15, 16 and 17.
- Table A22 contains information about breech deliveries in 1999 and 2000 by **level of hospital**.
  - Breech births were more likely to be delivered vaginally in Level III hospitals than Level I and II hospitals. In Level III hospitals in 2000, 23.7% of breech deliveries were vaginal, while in Levels I and II the rates of vaginal breech delivery were 13.5 and 13.4, respectively (see Health Canada 2000b for definition on levels of hospital care).
- Table A23 describes **perinatal and neonatal mortality** by level of hospital for breech deliveries in 1999 and 2000.
  - The perinatal mortality rate for breech presentation in 2000 was 77.5 (per 1,000 total breech births); when corrected for congenital anomalies, the rate was 53.2. The neonatal mortality rate for breech presentation was 32.9 (per 1,000 live breech births); when corrected for congenital anomalies, the rate was 22.7. *These rates must be interpreted with caution* due to the low number of cases involved.
  - For 87.2% of perinatal mortality cases that were breech presentations in 2000, delivery was vaginal. Perinatal and neonatal mortality rates were considerably higher for vaginal breech deliveries than for cesarean breech deliveries. *These rates must be interpreted with caution* due to the low number of cases involved.
  - Mortality rates in all cases were higher in Level III hospitals than in Level I and II hospitals. Obviously, this is due in part to the fact that high-risk cases tend to be referred to Level III hospitals.
  - Table A24 presents details for 1994 to 2000 on perinatal and neonatal mortality for breech deliveries. *These rates must be interpreted with caution* due to the low number of cases involved.

Maternal Factors

Maternal Age

Definitions

- ***Maternal age*** refers to the age of the mother in years at the time of the event in question.

Background

- Mothers 30 years and over are more likely than mothers aged 20-29 years to have cesarean sections, low birth weight births, pre-term births, maternal complications, and infants with chromosomal anomalies (MacNab, Macdonald, & Tuk, 1997).
- Teenaged mothers are more likely than mothers aged 20-29 to have low birth weight or pre-term infants (Tough, Svenson, & Schopflocher, 1999).
- In 1999, the mean maternal age was 28.7 years in **Canada** (Statistics Canada, 2002b), and 28.2 years in Alberta.

Data Sources

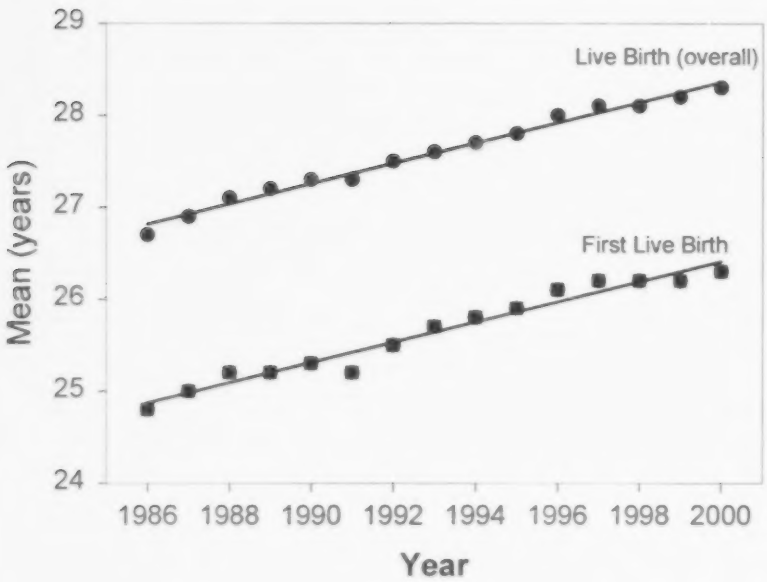
- Maternal age data: Vital Statistics Birth Registration files, Department of Government Services, January 2002 Release.

Maternal Age Trends and Effects

- Most pregnancy outcomes vary with maternal age. A summary table for 1998 to 2000 combined appears in Table A25.
  - Teenaged mothers are more likely than other mothers to have small infants, and are at increased risk of preterm birth and stillbirth, while having the lowest rate of multiple births. Teenaged mothers are least likely to have a midwife as primary birth attendant.
  - Mothers 40 years and older have elevated low and high birth weight rates, preterm birth rates, and stillbirth rates. They are most likely to have multiple births, and to have a midwife as primary birth attendant, although midwife attendant rates are very low for all age groups.
- In 2000, the mean maternal age at delivery reached a new high for Alberta at 28.3 years. There is a clear linear increase in mean maternal age since 1986 (see Table A26 and Figure 7).
  - Maternal age at first live birth was 24.8 years in 1986 and 26.3 years in 2000.
- Mean maternal age by residence RHA for live births for 1998 to 2000 combined is shown in Figure 8.

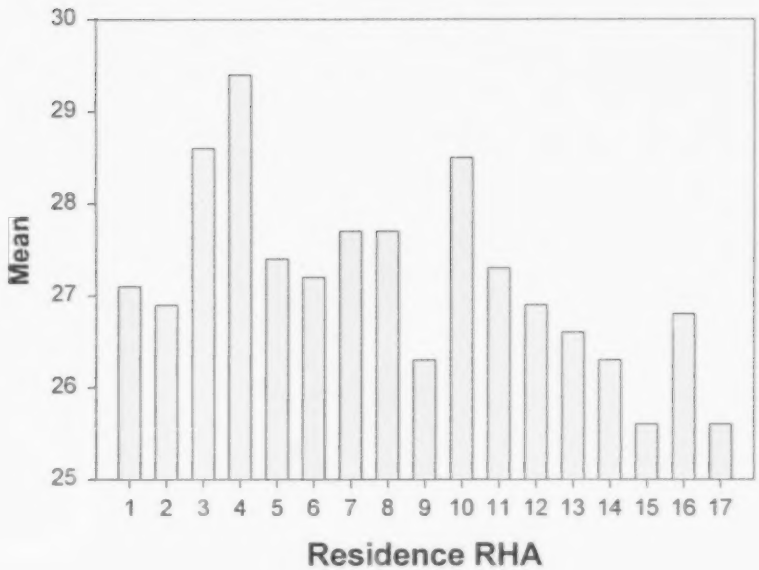
Maternal Factors

Figure 7.
Mean Maternal Age,
Alberta, 1986 - 2000



Maternal Factors

Figure 8.
Mean Maternal Age (years)
by Residence RHA,
Alberta, 1998 - 2000 Combined



Maternal Prenatal Morbidity

Definitions

- ***Diabetes (diabetes mellitus):*** A chronic syndrome of impaired carbohydrate, protein, and fat metabolism owing to insufficient secretion of insulin or to target tissue insulin resistance. It occurs in two major forms: Type 1 diabetes mellitus and Type 2 diabetes mellitus (Dorland, 2000).
- ***Heart disease:*** Any organic, mechanical, or functional abnormality of the heart, its structures, or the coronary arteries (Dorland, 2000). This category includes women with asymptomatic or symptomatic heart disease.
- ***Hypertension:*** High arterial blood pressure, diagnosed prior to pregnancy. In this case, this includes women who had blood pressure of 140/90 or higher, or women who were using antihypertensive drugs.
- ***Chronic renal disease:*** Any disease of the kidney persisting over a long period of time.
- ***Pre-natal bleeding:*** Vaginal bleeding prior to birth. In this case, bleeding is classified as occurring prior to 20 weeks gestation, at 20 weeks gestation or later, or at both before and after 20 weeks gestation.
- ***Pregnancy-induced hypertension:*** High arterial blood pressure with onset during pregnancy.
- ***Gestational diabetes:*** Diabetes mellitus with onset or first recognition during pregnancy; this category does not include diabetics who become pregnant (Dorland, 2000).
- Rates for the above measures are expressed in terms of percent of women delivering.

Background

- Although maternal obesity is associated with a reduced risk of delivery of a small for gestational age infant, high maternal weight is linked to increased perinatal mortality and neural tube defects, as well as increased rates of hypertension, preeclampsia, gestational diabetes, and cesarean delivery (de Groot, 1999).
- Pregnancy increases the incidence of maternal mortality for women with cardiac disease, due to increased risk for pulmonary edema, hypertension, infective endocarditis, thromboembolism, and fulminating peripartum cardiomyopathy (Gei & Hankins, 2001).
- Hypertension in pregnancy increases in frequency with maternal age. Chronic hypertension can result in maternal complications, such as placental abruption, stroke, and preeclampsia, and fetal complications, such preterm birth, low birth weight, and perinatal death (Livingston & Sibai, 2001).
- Renal insufficiency (kidney disease) can result in maternal hypertension, preeclampsia, preterm labour, stillbirth, and small for gestational age birth (Sanders & Lucas, 2001).

- Gestational diabetes is associated with increased risk of stillbirth and congenital anomalies if it is diagnosed before midpregnancy. Macrosomic infants are more common in the case of gestational diabetes, as well as pre-existing diabetes (Lucas, 2001).

Data Sources

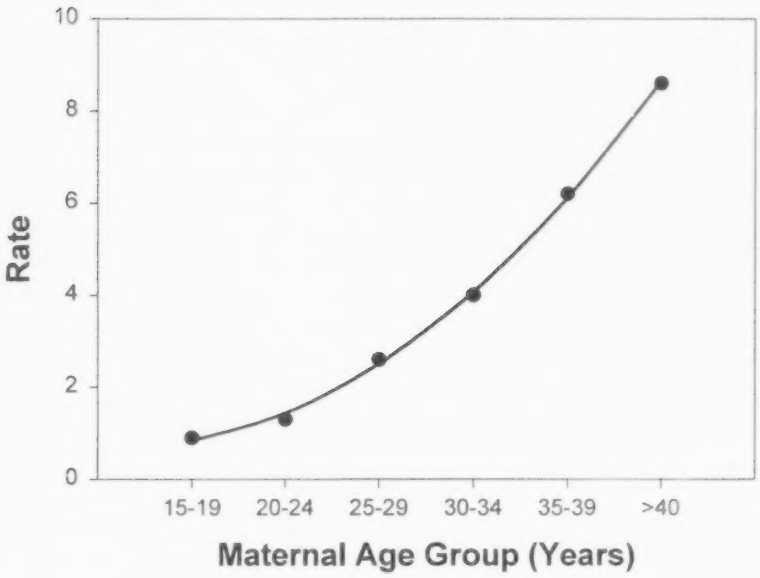
- Maternal prenatal morbidity data: Northern and Central Alberta Perinatal Outreach Program, Southern Alberta Perinatal Outreach Program.

Maternal Prenatal Morbidity Trends and Effects

- Data on the following prenatal maternal conditions appear in Tables A27, A28, and A29.
- Maternal pre-pregnancy weight of 91 kilograms or more was the most common condition among **pre-pregnancy conditions** reported here (all data reported below are for 1999 and 2000 combined).
  - Of Alberta women giving birth, 7.4% had a **pre-pregnancy weight of 91 kilograms or more**. Thus high maternal weight is a health concern for a considerable number of Alberta births.
- In comparison with rates of high maternal weight, the incidence of other pre-pregnancy conditions was low (each occurred in less than one percent of delivering women).
  - The rate of **pre-existing diabetes** was 0.7%.
  - **Heart disease** was present in 0.8% of women giving birth in Alberta.
  - **Pre-existing hypertension** occurred in 0.8% of Alberta women delivering infants.
  - **Chronic renal disease** amongst women giving birth was very rare, with a rate of just 0.1%.
- **Problems during pregnancy** were reported at higher rates, in general, than pre-pregnancy problems (all data reported below are for 1999 and 2000 combined).
  - **Pre-natal bleeding** was a relatively common occurrence, occurring in 5.2% of delivering women prior to 20 weeks gestation only, and in 2.8% of women at or after 20 weeks gestation only. Only 0.6% of women experienced pre-natal bleeding both before and after 20 weeks gestation.
  - **Pregnancy-induced hypertension** was diagnosed in 4.8% of Alberta women delivering infants.
  - **Gestational diabetes** occurred at a rate of 3.2% provincially.
    - This rate varied with **maternal age** (see Table A29 and Figure 9). Gestational diabetes was markedly more common in older mothers. The rate for mothers 15-19 years old was less than one percent, but the rate for mothers over 40 years old was more than eight percent.

Maternal Factors

Figure 9.
Gestational Diabetes Rate
(per 100 women with
completed risk assessment),
Alberta, 1999 - 2000 Combined



Maternal Prenatal Behaviours

Definitions

- ***Smokers*** are women who smoked cigarettes throughout pregnancy, or who quit smoking at some point during pregnancy.
  - ***Non-smokers*** did not smoke at all during pregnancy.
- ***Alcohol consumption*** refers to the consumption of alcoholic beverages at any time during pregnancy.
- ***Street drug*** use refers to the use of any street drug during pregnancy.
  - Marijuana and cocaine are the drugs used most commonly by Alberta women who use street drugs during pregnancy.
- ***Prenatal class attendance*** refers to a positive response from the mother when asked if she attended prenatal classes during pregnancy. No definition of prenatal classes is provided to delivering mothers. Prenatal class attendance data are provided below for first births only.
- **Rates** for the above measures are expressed as percent of live births.

Background

- The negative effects of smoking on the fetus and neonate are well-documented, and include decreased birth weight, decreased postnatal growth, and increased risk of ectopic pregnancy, spontaneous abortion, preterm birth, perinatal death and sudden infant death syndrome (Campbell, 1992; Chen, Fair, Wilkins, Cyr, and the Fetal and Infant Mortality Study Group of the Canadian Perinatal Surveillance System, 1998; Lee, 1998; Pivarnik, 1998; Pollack, Lantz, & Frohna, 2000; Tough et al., 1999).
- Learning disabilities, hyperactivity, and deficits in attention, memory, and cognitive processing can result from alcohol consumption during pregnancy, and there is growing evidence that binge drinking (consumption of large amounts of alcohol in short periods of time) is particularly harmful (Maier & West, 2001). Alcohol abuse during pregnancy can cause fetal alcohol syndrome, which consists of poor prenatal and postnatal growth, central nervous system abnormalities, and craniofacial anomalies (Wagner, Katikaneni, Cox, & Ryan, 1998).
- Street drug use during pregnancy can have wide-ranging negative effects. Marijuana use has been implicated in intrauterine growth retardation; as well, infants born to marijuana users may be lethargic, with impaired visual responses, and decreased startle reflexes (Wagner et al., 1998). Cocaine use is associated with preterm birth and fetal growth retardation (Plessinger & Woods, 1998).
- In a large sample of **Canadian** mothers in fiscal year 1996/97, 21.3% reported smoking cigarettes during pregnancy, with 7% reporting smoking more than 10 cigarettes per day. The smoking rate was highest for younger mothers and lowest for mothers over 30 years of age (Health Canada, 2000a).

- The same survey showed that 16.6% of mothers consumed alcohol at some point during pregnancy in **Canada** in 1996/97, with older mothers being more likely to drink alcohol during pregnancy than younger mothers. Binge drinking is more common among younger mothers, however (Maier & West, 2001).

Data Sources

- Cigarette smoking, alcohol consumption, street drug use, prenatal class attendance and live birth data : Vital Statistics Birth Registration files, Department of Government Services, April 2002 Release.
- Data on maternal smoking, alcohol consumption, street drug use, and prenatal class attendance for live births are derived from the Vital Statistics Notice of Live Birth and Stillbirth. This information is not complete for all births; analyses include only those births for which the relevant information is available.
  - Note that these data are self-reported, and thus are subject to the biases inherent in such data (e.g., inaccurate reporting due to social desirability issues).
- O new Notice of Live Birth forms distributed in 2000, the "Quit" option for the question "During this pregnancy did mother smoke?" was not available, leaving "Yes" and "No" as the only options. In order to allow combination of data for 1998 through 2000, all "Yes" and "Quit" responses were grouped into a single category (representing Smokers), and "No" responses into another (representing Nonsmokers).

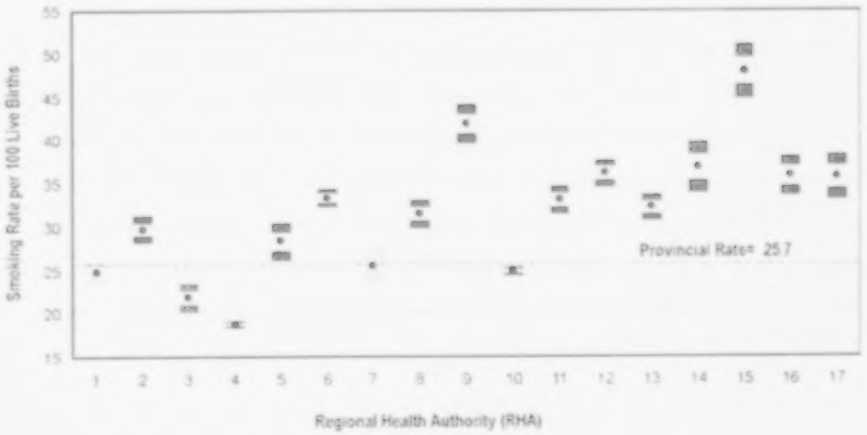
Maternal Prenatal Behaviours Trends and Effects: Cigarette smoking

- Table A30 contains data on smoking among women who gave birth to a live infant in Alberta between 1998 and 2000.
  - 25.7% of Alberta women who gave birth to a live infant between 1998 and 2000 reported smoking at some point during their pregnancy; 74.3% reported not smoking during pregnancy.
- Table A31 provides rates for several indicators for women who did not smoke during pregnancy and for women who either smoked or quit smoking during pregnancy.
  - Non-smoking women giving birth were older, on average, than smoking women who gave birth between 1998 and 2000. Average **maternal age** for smokers was 25.8 years; average maternal age for non-smokers was 29.1 years.
  - Babies born to non-smokers were larger than those born to smokers.
    - Babies born to non-smokers weighed more (**mean birth weight** 3,429 grams) than babies born to smokers (mean birth weight 3,266 grams).
    - The **low birth weight** rate for non-smokers was 5.2 (per 100 live births); the rate for smokers was 8.3.

- Non-smokers were more likely to carry their babies to term. The **pre-term birth** rate for non-smokers was 7.3 (per 100 live births); the rate was 9.1 for smokers.

- Rates for smoking during pregnancy by **residence RHA** for 1998 to 2000 combined appear in Table A32. Smoking rates during pregnancy were lower than the provincial average in RHAs 3, 4, and 10, and higher than the provincial average in all other RHAs, with the exception of RHAs 1 and 7, where rates did not differ significantly from the provincial average (see Map 5).

Map 5. Smoking Rate (per 100 live births) by Residence RHA, Alberta, 1998 – 2000 Combined.



Map 5. Smoking Rate (per 100 live births)
by Residence RHA, Alberta, 1998 – 2000 Combined.

Maternal Prenatal Behaviours Trends and Effects: Alcohol consumption

- Table A30 describes incidence of alcohol consumption among women who gave birth to a live infant in Alberta between 1998 and 2000.
  - 4.2% of women consumed alcohol during pregnancy for 1998 to 2000 combined.
- Table A31 provides rates for several indicators for women who did and women who did not report consumption of alcohol during pregnancy.
  - Mothers who consumed alcohol during pregnancy tended to be younger than mothers who did not consume alcohol. Mean **maternal age** for mothers who did not consume alcohol during pregnancy was 28.3 years, compared with 26.6 years for those who did consume alcohol.
  - Babies born to mothers who did not consume alcohol during pregnancy were larger than babies born to mothers who reported alcohol consumption during pregnancy.
    - Mean **birth weight** was 3,391 grams for babies born to mothers who did not consume alcohol during pregnancy, compared with 3,317 for babies born to mothers who did consume alcohol.
    - The **low birth weight** rate was 5.8 (per 100 live births) for babies with mothers who did not consume alcohol during pregnancy, and 8.3 for those babies whose mothers did consume alcohol.
  - Amongst babies of women who did not consume alcohol during pregnancy, **pre-term births** occurred at a rate of 7.7 (per 100 live births). The pre-term birth rate was 10.0 for babies of women who did consume alcohol during pregnancy.
- Alcohol consumption rates during pregnancy by **residence RHA** for 1998 to 2000 combined are in Table A32. Alcohol consumption was lower than the provincial average in RHAs 2, 4, 5, 8, and 10, and higher than the provincial average in RHAs 1, 6, 9, 13, 14, 15, 16, and 17.

Maternal Prenatal Behaviours Trends and Effects: Use of street drugs

- Table A30 contains data on incidence of street drug use among women who gave birth to a live infant in Alberta between 1998 and 2000.
  - 1.7% of Alberta women who had a live birth between 1998 and 2000 reported using street drugs during pregnancy.
- Table A31 provides rates for several indicators for street drug users and non-users for 1998 to 2000 combined.
  - Mothers not using street drugs tended to be considerably older than those using street drugs. Mean **maternal age** for non-users of street drugs was 28.3 years, while mean maternal age for users was 23.7 years.
  - Street drug use was associated with smaller babies.
    - **Mean birth weight** was 3,392 grams for babies of women not reporting street drug use, and 3,177 grams for users of street drugs.

- The **low birth weight rate** was 5.8 (per 100 live births) for babies born to non-users of street drugs, compared with a rate of 12.7 for users.
- Out of every 100 live births to non-users of street drugs, 7.6 were **pre-term**. The pre-term rate for street drug users was 14.9.

- Incidence of street drug use during pregnancy by **residence RHA** for 1998 to 2000 combined is in Table A32. Street drug use was lower than the provincial average in RHAs 1, 3, 4, 7, and 17. Street drug use was higher than the provincial average in RHAs 6, 9, 10, 12, 15, and 16.

Maternal Prenatal Behaviours Trends and Effects: Prenatal Classes

- For 1998 to 2000 combined, 63.5% of first-time mothers having live births reported attending prenatal classes (see Table A30).
- Table A31 contains information on a number of indicators for first-time mothers attending prenatal classes and those not attending.
  - **Mean maternal age** for those attending classes was 27.0 years, compared with a mean maternal age of 24.9 years for those not attending .
  - Babies born to mothers who reported attending prenatal classes were larger than babies born to mothers who reported not attending prenatal classes.
    - **Mean birth weight** for infants whose mothers attended prenatal classes was 3,404 grams, and mean birth weight was 3,235 grams for infants whose mothers did not attend prenatal classes.
    - The **low birth weight rate** was 4.1 (per 100 live births) for infants with mothers who attended prenatal classes and 9.5 for infants whose mothers did not attend.
  - The **pre-term birth rate** (per 100 live births) was 6.0 for infants whose mothers attended prenatal classes. The pre-term birth rate was 11.4 for infants whose mothers did not attend prenatal classes.
- Prenatal class attendance rates by **residence RHA** for 1998 to 2000 combined are provided in Table A32. Prenatal class attendance was lower than the provincial average in RHAs 6, 9, 10, 12, 14, 15, 16, and 17, and higher than the provincial average in RHAs 1, 4, and 8.

Births

Fertility rates

Definitions

- ***General fertility rate***: Number of live births per 1,000 women aged 15-49 in a given year.
- ***Age-specific fertility rate***: Number of live births per 1,000 women in a given age group in a given year.
- ***Total fertility rate***: Number of live births per 1,000 women aged 15-49 over a lifetime.
  - This measure provides an estimate of average family size (e.g., a total fertility rate of 2,000 would indicate an average of 2.0 live births per woman over a lifetime). This rate is equal to the sum of the age-specific fertility rates for each year of age between 15 and 49.
- All live births are included in fertility rates, regardless of birth weight or gestational age.

Background

- Total fertility rates in **Canada** underwent dramatic changes in the twentieth century, including the post-war baby boom and a dramatic decline in fertility rates from the mid-1960's to the late 1970's. Canada's total fertility rate is now at an unprecedented low, with Newfoundland having the lowest fertility rate in the country throughout the 1990's and the prairie provinces having the highest (Statistics Canada, 2001).
- Total fertility rate is declining in **Canada** as well as in Alberta, although the rate is higher in Alberta. In 1999, Statistics Canada reported Canada's total fertility rate as 1,527 and Alberta's as 1,708 (Statistics Canada, 2002b).
  - Fertility rates are higher in Alberta than in Canada for women under 35, while national and provincial fertility rates are very similar for women aged 35 and older (Statistics Canada, 2002b).

Data Sources

- Live births: Vital Statistics Birth Registration files, Department of Government Services, January 2002 Release.
- Population estimates: Alberta Health Care Insurance Plan Stakeholder Registration File, Alberta Health and Wellness.

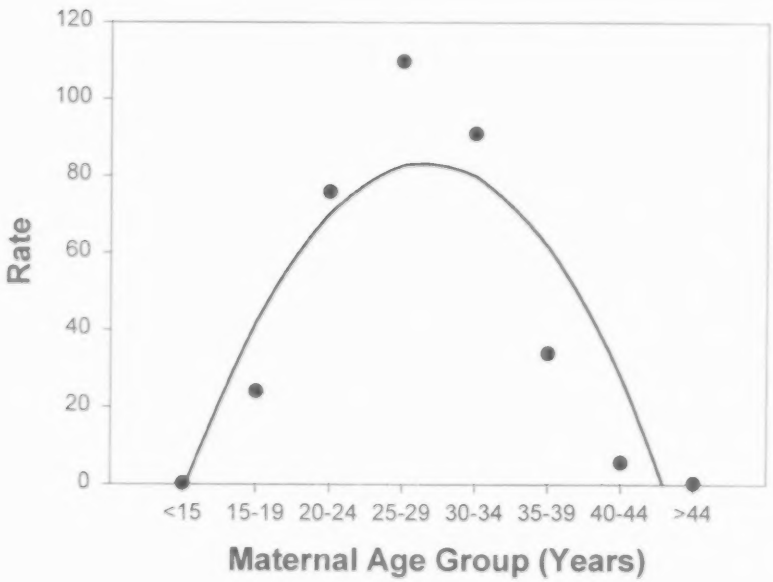
Fertility Rates Trends and Effects

- The **general fertility rate** (number of live births per 1,000 women aged 15-49 in a given year) continues to decline in Alberta. The 2000 rate of 45.6 is the lowest general fertility rate between 1986 and 2000 (see Table A1).
  - For 1998 to 2000 combined, the general fertility rate was lower than the provincial average in residence RHAs 3, 4, 7, and 10, and higher than

the provincial average in RHAs 1, 2, 6, 9, 11, 12, 13, 14, 15, and 17 (see Map 6; see Table A33 for general fertility rates by residence RHA).

- **Total fertility rate** (number of live births per 1,000 women aged 15-49 over a lifetime) also reached a fifteen-year low of 1,660 in 2000 (see Table A1).
- **Age-specific fertility rates** show declining fertility in women under 30 years of age, and increasing fertility for women aged 30 to 44 years (see Table A34 and Figure 10).
  - In 1996, the age-specific fertility rate for women aged 30 to 34 years surpassed that of 20 to 24 year old women. Also since 1996, the age-specific fertility of women aged 35 to 39 years has surpassed that of women aged 15 to 19 years. Women aged 25-29 continue to have the highest fertility rates, although the fertility rate in this age group has declined sharply in the last fifteen years.
  - Table A35 shows age-specific fertility rates for the RHAs for 1998 to 2000.

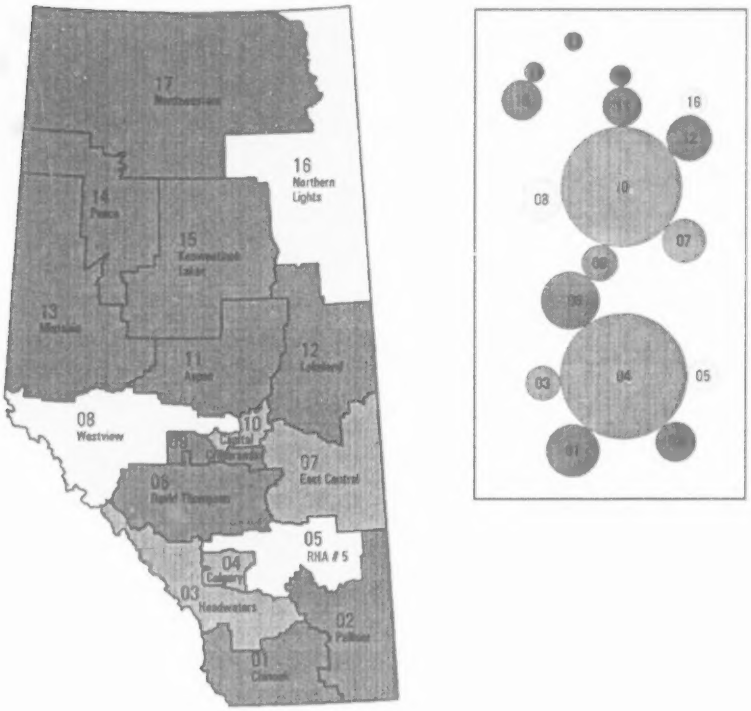
Figure 10.
Age-Specific Fertility Rates, Alberta, 1998 - 2000 Combined

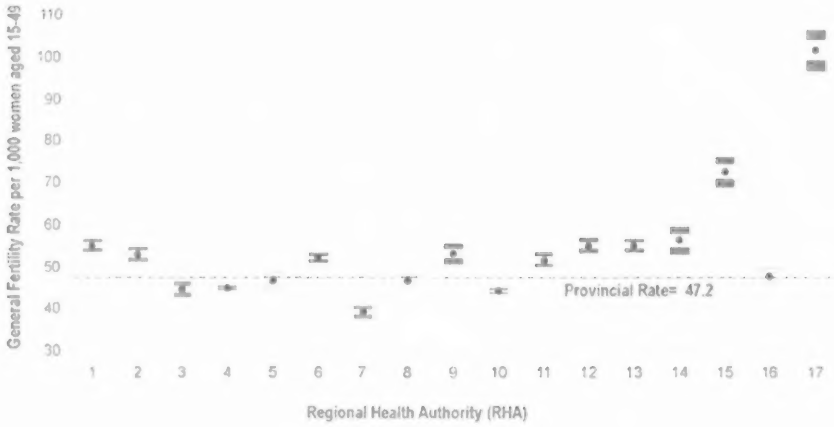


Map 6. General Fertility Rate (per 1,000 women aged 15-49) by Residence RHA, Alberta, 1998 – 2000 Combined.

Live Births

Map 6. General Fertility Rate (per 1,000 women aged 15-49) by Residence RHA, Alberta, 1998 – 2000 Combined.





Live Births

Definitions

- ***Live birth***: The complete expulsion or extraction from the mother, irrespective of the duration of the pregnancy, of a fetus in which, after expulsion or extraction, there is breathing, beating of the heart, pulsation of the umbilical cord or unmistakable movement of voluntary muscle, whether or not the umbilical cord has been cut or the placenta is attached. (Alberta Vital Statistics Act, RSA 1980 cV-4 s1).
- ***Total births***: The sum of live births and stillbirths in a given year.
- ***Crude birth rate***: Number of live births per 1,000 population in a given year.

Background

- The **Canadian** crude birth rate has decreased over the last several years. In 1999, the Canadian crude birth rate was 11.1, while the Alberta rate was 12.9 (both figures from Statistics Canada, 2002b).

Data Sources

- Live births: Vital Statistics Birth Registration files, Department of Government Services, January 2002 Release.
- Stillbirths: Vital Statistics Stillbirth Registration files, Department of Government Services, January 2002 Release.
- Population estimates: Alberta Health Care Insurance Plan Stakeholder Registration File, Alberta Health and Wellness.

Live Births Trends and Effects

- There were 36,613 **live births** in 2000 (see Table A1).
- **Total births** (including live births and stillbirths) for 1986 to 2000 by **level of hospital care** appear in Table A36.
  - In 2000, 22.7% of births occurred in Level III hospitals, 53.2% in Level II hospitals, 23.2% in Level I hospitals, and 0.9% out of hospital (see Health Canada 2000b for definition of levels of hospital care).
- While the number of live births has declined systematically over the last fifteen years, there has been a concurrent increase in the population of the province. Thus, the **crude birth rate** (number of live births per 1,000 population) has declined, reaching a low of 12.3 in 2000 (see Table A1).

Birth Weight

Definitions

- ***Low birth weight*** infants have a birth weight less than 2,500 grams.
  - ***Low birth weight rate***: Number of live low birth weight infants per 100 live births.
  - Since 1990, the low birth weight rate has included live newborns weighing less than 500 grams due to changes in registration and reporting (Svenson, Schopflocher, Sauve, and Robertson, 1998) and improvements in and access to perinatal care.
- ***Small for gestational age*** infants have a birth weight below the 10th percentile of appropriate for gestational age infants (see Robertson, Svenson, & Kyle, 2002).
  - ***Small for gestational age rate***: Number of live small for gestational age singleton births per 100 live singleton births.
  - Low birth weight infants may be small for gestational age, or pre-term, or both. These types of low birth weight may have different underlying causes, as well as different effects on later development (Millar & Chen, 1998; Wallace & McCarton, 1997).
- ***High birth weight*** infants weigh 4,000 grams or more at birth.
  - ***High birth weight rate***: Number of live high birth weight infants per 100 live births.
- ***Large for gestational age*** infants have a birth weight above the 90th percentile of appropriate for gestational age infants (see Robertson, Svenson, & Kyle, 2002).
  - ***Large for gestational age rate***: Number of live large for gestational age singleton births per 100 live singleton births.

Background

- Low birth weight is correlated with a number of health concerns, including maternal, fetal, neonatal and long-term complications (Millar & Chen, 1998; Pivarnik, 1998)) and fetal and infant mortality (Chen et al., 1998; Nault, 1997).
- Maternal smoking and a low level of maternal education are associated with increased incidence of small for gestational age births, even after adjusting for confounding factors such as maternal age, household income, and receipt of prenatal care (Millar & Chen, 1998).
- Extremely low birthweight children have elevated rates of disability in a number of areas, and a high level of educational support is required for these children (Whitfield, Grunau, & Holsti, 1997).
- Numerous risk factors for low birth weight have been identified, including smoking or alcohol/drug use during pregnancy, low or high maternal age, low socioeconomic status, multiple pregnancy, poor prenatal care, low level of maternal education, pre-term birth, and gender (low birth weight infants

are more likely to be female) (Chen et al., 1998; Pivarnik, 1998; Pollack, Lantz, & Frohna, 2000; Tough, Svenson, & Schopflocher, 1999). Smoking is the most important modifiable behaviour associated with low birth weight (Wilkins & Houle, 1999).

- A recent study has indicated that the incidence of low birth weight is higher amongst singleton births conceived with the use of assisted reproductive technology than in the general population of singleton births (Schieve, Meikle, Ferre, Peterson, Jeng, & Wilcox, 2002).
- High birth weight has been associated with higher rates of operative delivery, birth trauma, and infant morbidity (Rodrigues, Robinson, Kramer, & Gray-Donald, 2000).
- Babies born to first nations mothers weigh more on average than babies born to non-native mothers. The distribution of birth weights is shifted to the right for first nations infants, resulting in lower rates of low birth weight, and higher rates of high birth weight (Armstrong, Robinson, & Gray-Donald, 1998; Rodrigues et al., 2000).
- Mean birth weight in **Canada** in 1999 was 3,406 grams (Statistics Canada, 2002b); the mean for Alberta in 1999 was 3,388 grams.
- The **Canadian** low birth weight rate was 5.6 in 1999 (Statistics Canada, 2002b), compared with 5.9 in Alberta in 1999.
- The high birth weight rate for **Canada** in 1999 was 13.3 (Statistics Canada, 2002b); the Alberta rate was 12.6.

Data Sources

- Birth weight data, live birth data: Vital Statistics Birth Registration files, Department of Government Services, January 2002 Release.
- Gestational age birth weight norms: Robertson, Svenson, & Kyle, 2002.

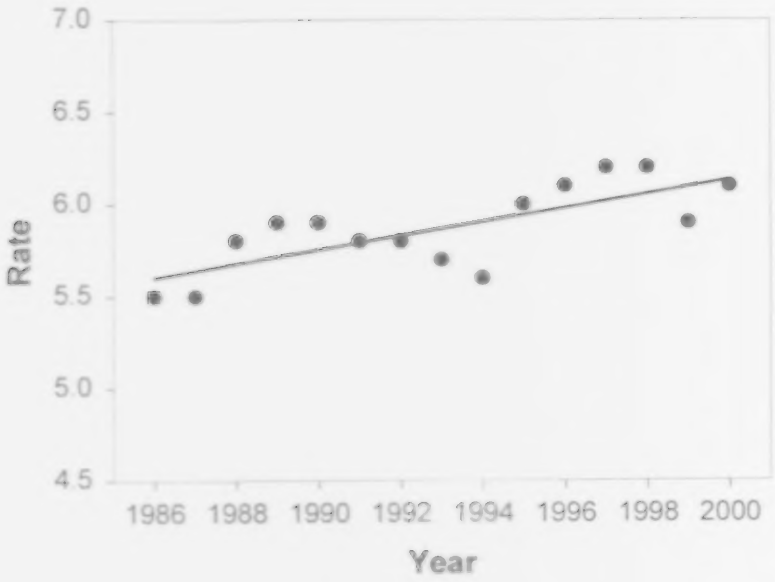
Birth Weight Trends and Effects: Low birth weight

- The **low birth weight** rate stabilized over the several years leading up to 2000, although the 2000 rate is higher than the 1986 rate and there is a significant linear increasing trend (see Table A1 and Figure 11).
  - In 2000, 6.1% of all live births were low birth weight births.
  - Time trend data for several categories of low birth weight appear in Table A37.
- The **low birth weight rate for singleton term births** was 1.6 in 2000 (see Table A38); this rate has declined slightly over the fifteen year study period.
  - Thus low birth weight rate increases from 1986 to 2000 must be a function of increasing pre-term births and/or multiple births rather than singleton term births.
- In Table A39, low birth weight births are classified as **pre-term or term, and singleton or multiple**.

- In 2000, 72.0% of low birth weight births were pre-term births and 25.1% were multiple births. 20.5% of low birth weight births were both pre-term and multiple births.
- The rate of low birth weight births for multiple pre-term births increased.

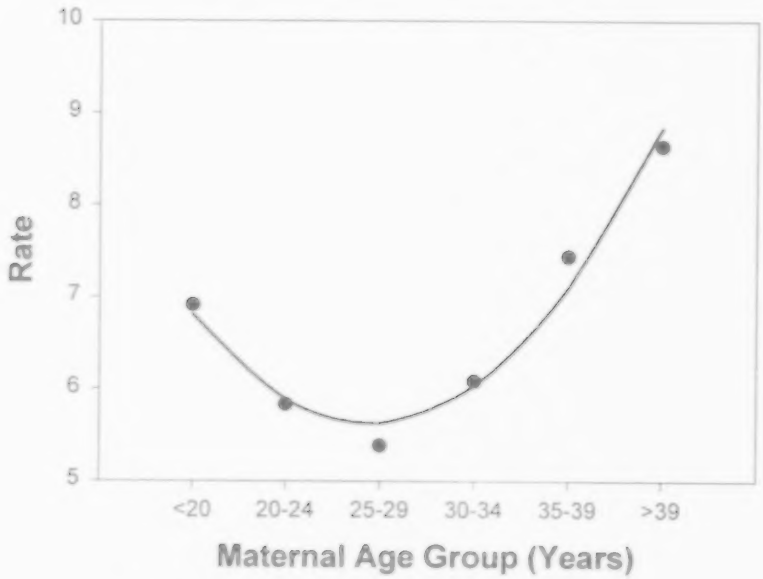
- Low birth weight rates vary with **maternal age**, as seen in Table A40 and Figure 12.
  - The low birth weight rate is elevated for teenage mothers and mothers aged 35 and over. The rate is lowest for mothers aged 25 to 29 years.
- Low birth weight births for **residence and facility RHAs** for 1986 to 2000 are in Table A41.
  - Map 7 and Table A42 include data for residence RHAs from 1998 to 2000 combined. RHA 4 had a significantly higher rate of low birth weight births than the provincial average, while RHA 14 had a low birth weight rate that was significantly lower than the provincial average.
- The **small for gestational age** rate for singleton live births has declined steadily since 1986, and reached a low of 7.9 (per 100 live singleton births) in 2000 (see Table A43).
  - Combined data for 1998 to 2000 indicate that SGA rates vary with **region** (see Table A44). The SGA rate was higher than the provincial average in residence RHAs 2 and 4. RHAs 1, 8, 11, 12, and 13 had SGA rates that were lower than the provincial average.

Figure 11.
Low Birth Weight Rate
(per 100 live births),
Alberta, 1986 - 2000



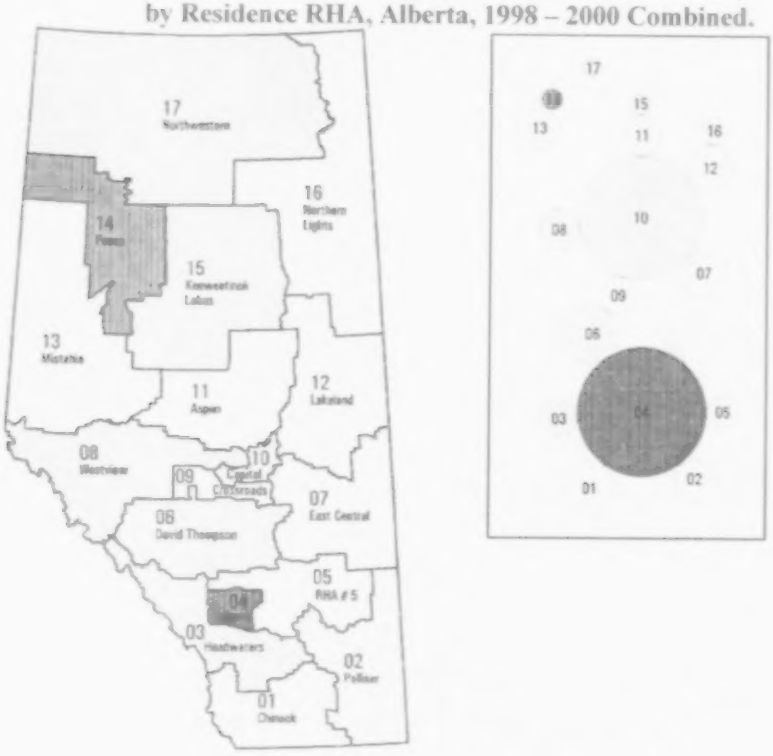
Live Births

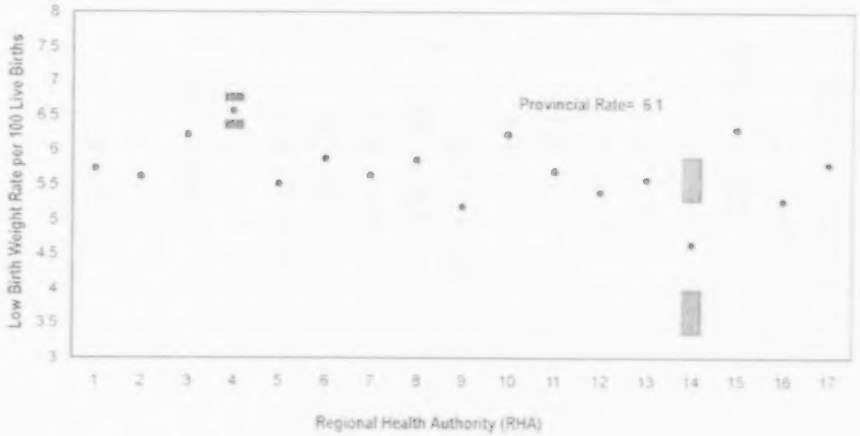
Figure 12.
Low Birth Weight Rate
(per 100 live births)
by Maternal Age Group,
Alberta, 1998 - 2000 Combined



Live Births

Map 7. Low Birth Weight Rate (per 100 live births) by Residence RHA, Alberta, 1998 – 2000 Combined.





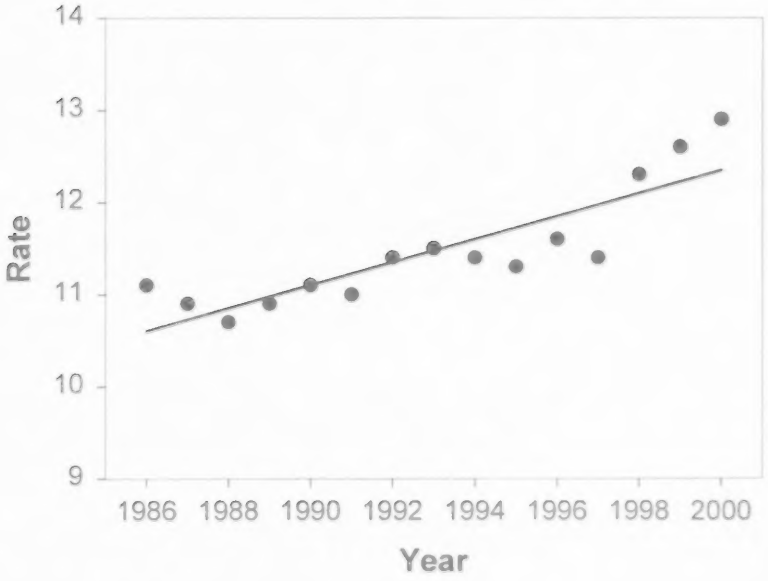
Live Births

Map 7. Low Birth Weight Rate (per 100 live births) by Residence RHA, Alberta, 1998 – 2000 Combined.

Birth Weight Trends and Effects: High birth weight

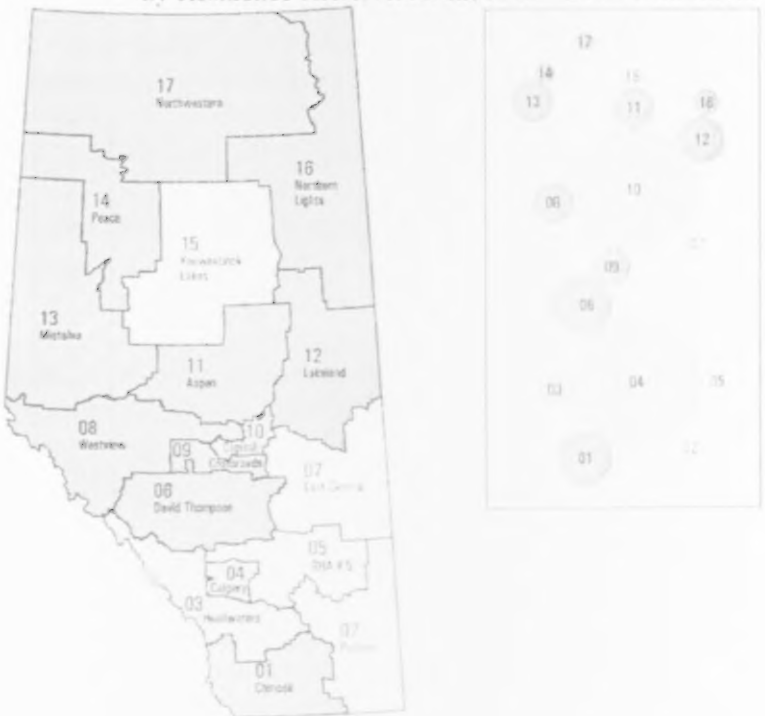
- There has been a small but discernible and significant increase in **mean birth weight** from 1986 to 2000 (see Table A43). In 2000, the mean birth weight for a live singleton term infant was 3,491 grams.
  - See Appendix 4 for a short report on causes and consequences of increasing birth weight for term births.
- The **high birth weight** rate was stable for several years, but has increased since 1998 (see Table A1). In 2000, 12.9 out of every 100 live births were high birth weight births (see Figure 13).
  - See Table A37 for time trend data on birth weights of 4,000 or more grams and 4,500 or more grams.
- **Maternal age** is related to the high birth weight rate.
  - High birth weight babies are most likely to be born to mothers over 25 years of age, and least likely to be born to teenage mothers (see Table A45).
- High birth weight rates for **residence and facility RHAs** for 1986 to 2000 are in Table A46. Combined data for 1998 to 2000 are in Table A42.
  - Combined data for 1998 to 2000 show that residence RHAs 3, 4, and 10 have lower HBW rates than the provincial average, while the rate is higher than the provincial average in RHAs 1, 6, 8, 9, 11, 12, 13, 14, 16 and 17 (see Map 8 and Table A42).
- Time trend information on **large for gestational age** infants is provided in Table A43 (and Table A1). The large for gestational age rate increased from 9.6 per 100 singleton births in 1986 to 12.3 in 2000.
  - When combined data for 1998 to 2000 are considered, **residence RHAs** 1, 6, 8, 9, 11, 12, 15, 16, and 17 had large for gestational age rates higher than the provincial average, while RHAs 2, 3, and 4 had large for gestational age rates lower than the provincial average (see Table A44).

Figure 13.
High Birth Weight Rate
(per 100 live births),
Alberta, 1986 - 2000

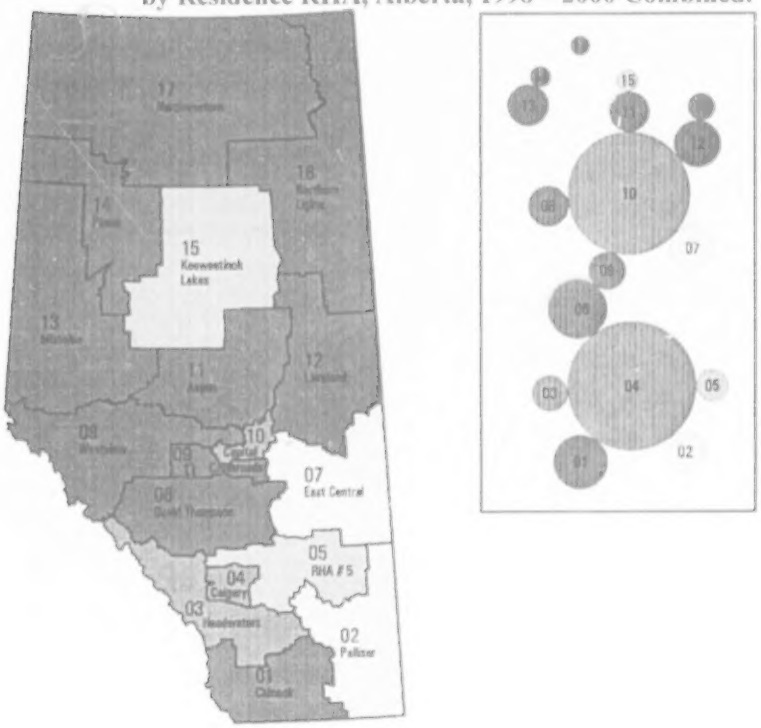


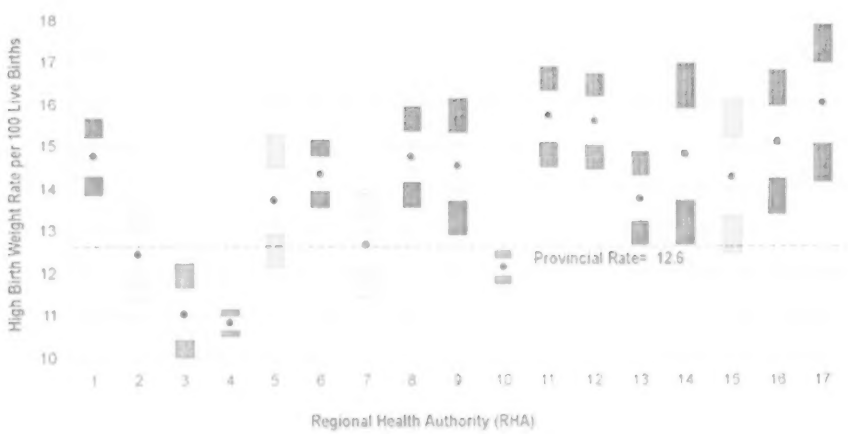
Live Births

Map 8. High Birth Weight Rate (per 100 live births) by Residence RHA, Alberta, 1998 – 2000 Combined.



Map 8. High Birth Weight Rate (per 100 live births) by Residence RHA, Alberta, 1998 – 2000 Combined.





Pre-Term Births

Definitions

- ***Pre-term births*** occur prior to 37 completed weeks of gestation (Dorland, 2000). Gestation is measured in weeks from the date of the last menstrual period of the mother.
  - ***Pre-term birth rate***: Number of pre-term births per 100 live births in a given year.

Background

- Pre-term birth is seen as one of the most important challenges to perinatal health (Health Canada, 2002a).
- Preterm birth is associated with neurocognitive, respiratory, and opthalmologic problems and is also the leading cause of perinatal mortality (Joseph, Kramer, Marcoux, Ohlsson, Wen, Allen, & Platt, 1998; Kramer, Platt, Yang, Joseph, Wen, Morin, & Usher, 1998).
  - Joseph et al. suggest that a number of factors may be contributing to increasing pre-term birth rates in Canada, including higher rates of multiple births, obstetrical intervention, and use of ultrasound technology to estimate gestational age.
- Few babies born before 23 weeks gestation survive, though the proportion of survivors at the limits of viability has increased in recent years. Babies born very prematurely who do survive have high rates of neurodevelopmental handicap (Hack & Fanaroff, 1999).
- Some pre-term infants are small for gestational age, and others are not. The risk factors for small for gestational age pre-term births are different from those for pre-term births of appropriate for gestational age infants. Small for gestational age pre-term births occur more often with mothers who smoke, who are over 35 years of age, who have body mass indices that are high or low, who have hypertension, and who have hemorrhaging from placental abruption (Zeitlin, Ancel, Saurel-Cubizolles, & Papiernik, 2001).
- Risk factors for preterm birth include genital tract infection, smoking, preeclampsia, incompetent cervix, prior preterm birth, and placental abruption, as well as psychological factors such as stress and depression (Health Canada, 2002a).
- The **Canadian** pre-term rate for 1999 was 7.3 (Statistics Canada, 2002b); the Alberta rate for 1999 was 7.8.
  - In Canada in 1998, the pre-term birth rate was 6.0 for singleton births (Statistics Canada, 2002b), compared with 6.5 in Alberta. For multiple births, the 1998 pre-term rate was 53.0 in Canada (Statistics Canada, 2002b) and 52.8 in Alberta.

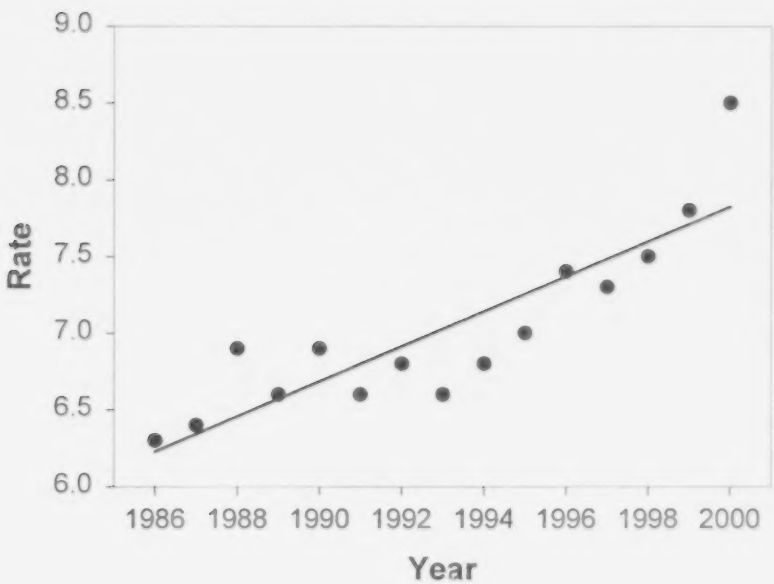
Data Sources

- Gestational age data, live birth data: Vital Statistics Birth Registration files, Department of Government Services, January 2002 Release.

Pre-Term Births Trends and Effects

- The **pre-term birth rate** (per 100 live births) reached a new high of 8.5 in 2000 (see Table A1 and Figure 14).
- Table A47 categorizes pre-term births according to **birth weight** and **plurality**. In 2000, 52.3% of pre-term weight births were low birth weight births and 19.7% were multiple births.
  - Compared with fifteen years ago, a greater proportion of pre-term births is multiple births.
    - Rising pre-term rates were not solely a function of increasing multiple birth rates. The pre-term birth rate for both singleton and multiple births increased between 1986 and 2000 (see Table A48). In 2000, 7.0% of singleton births and 55.6% of multiple births were pre-term.
- **Maternal age** is clearly related to the pre-term birth rate (see Table A49).
  - As can be seen in Figure 15, pre-term births are least common for mothers who are in their twenties. The rate is elevated for teenage and older mothers, especially mothers over 35 years of age.
- Pre-term births for 1986 to 2000 for **residence and facility RHAs** are provided in Table A50. Pre-term rates for both residence and facility RHAs for 1998 to 2000 combined are presented in Table A42.
  - Map 9 shows the 1998 to 2000 combined data for **residence RHAs**. The pre-term birth rate is higher than the provincial average in RHA 10, and lower than the provincial average in RHAs 1, 2, 6, 9, 13, and 14.

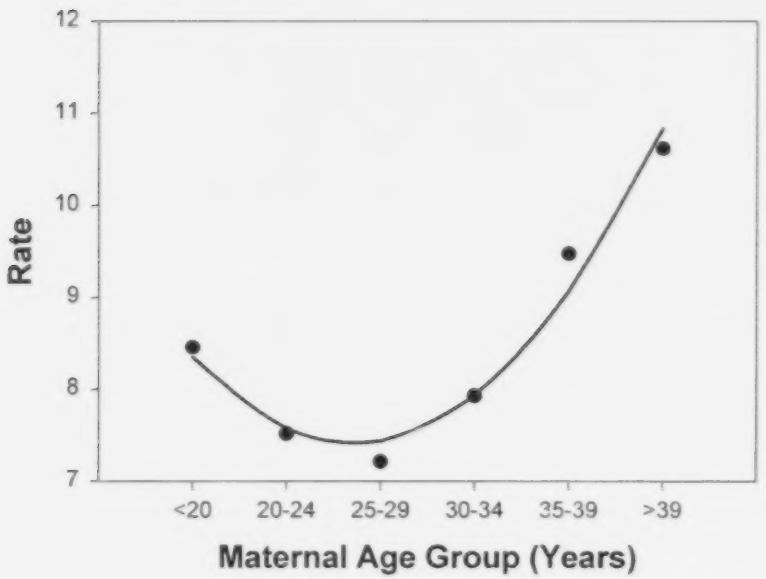
Figure 14.
Pre-Term Birth Rate
(per 100 live births),
Alberta, 1986 - 2000



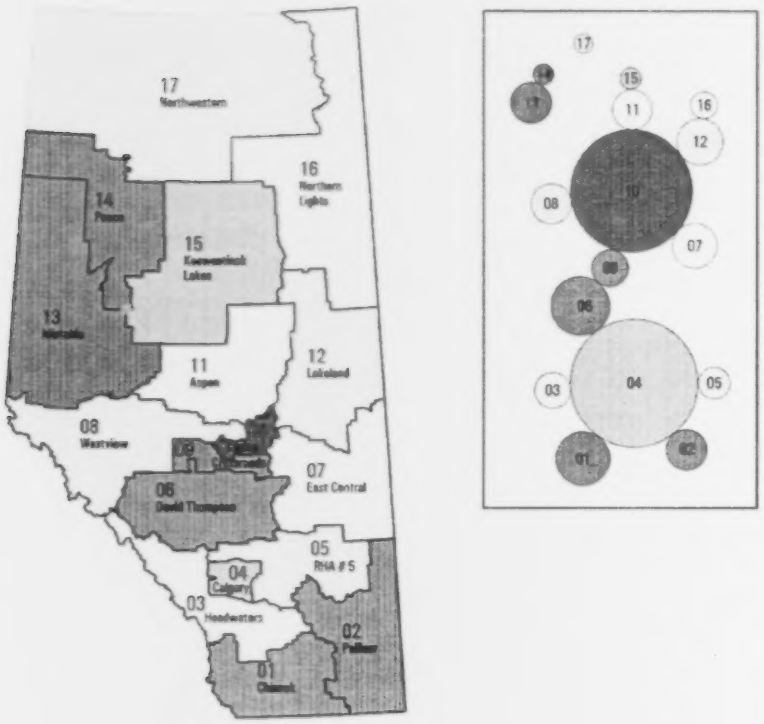
Live Births

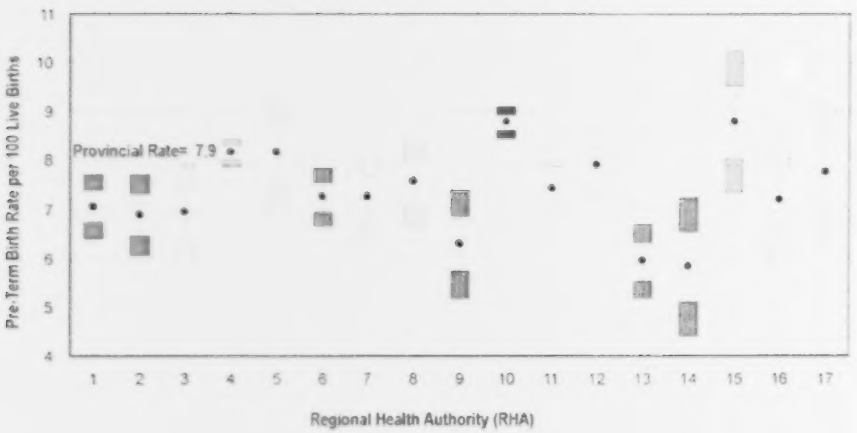
Live Births

Figure 15.
Pre-Term Birth Rate
by Maternal Age Group,
Alberta, 1998 - 2000 Combined

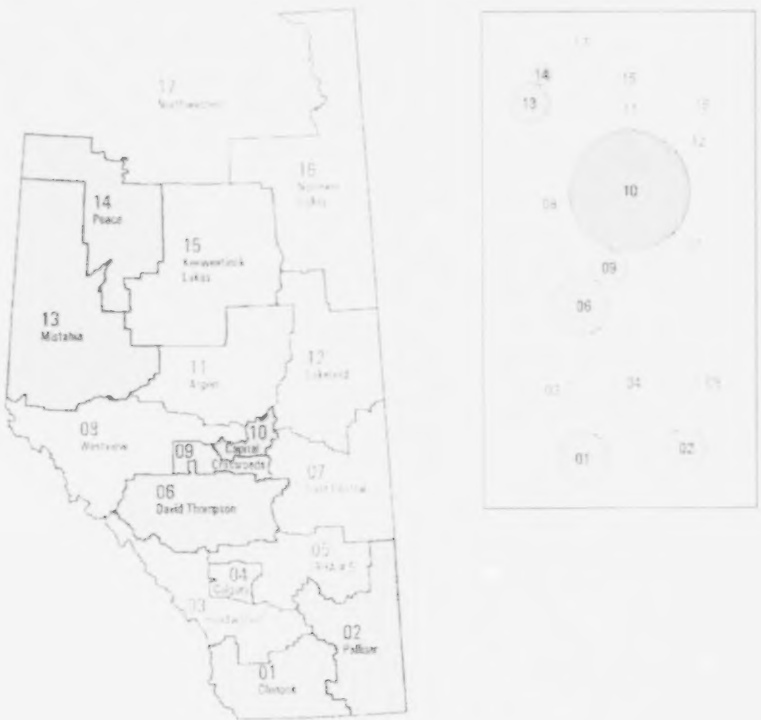


Map 9. Pre-Term Birth Rate (per 100 live births) by Residence RHA, Alberta, 1998 – 2000 Combined.





Map 9. Pre-Term Birth Rate (per 100 live births)
by Residence RHA, Alberta, 1998 – 2000 Combined.



Regional Health Authority (RHA)

Multiple Births

Definitions

- ***Multiple pregnancy:*** Pregnancy in which two or more fetuses exist simultaneously (Dorland, 2000).
- ***Multiple birth:*** The birth of two or more offspring produced in the same gestation period (Dorland, 2000). This includes both live births and stillbirths.
  - ***Multiple birth rate***: Number of live multiple births per 100 live births.

Background

- Multiple pregnancy is associated with a higher incidence of maternal hypertension, post-partum hemorrhage, and cesarean section (Senat, Ancel, Bouvier-Colle, & Breart, 1998) and higher rates of intrauterine growth restriction and fetal death (Alexander, Kogan, Martin, & Papiernik, 1998).
- Multiple births are also more likely to be pre-term and result in low birth weight infants (Tough et al., 1999).
- Perinatal mortality rates reach their lowest level at 38 weeks gestation for twins, compared with 40 weeks for singletons, providing some support for the argument that the definition of pre-term birth should be different for multiple births than for singleton births (Kiely, 1998).
- Pregnancy complications and poor perinatal outcomes are more common in twin pregnancies conceived with assisted reproductive technologies than in twin pregnancies conceived spontaneously or by ovulation induction (Daniel, Ochshorn, Fait, Geva, Bar-Am, & Lessing, 2000).
- The **Canadian** multiple birth rate was 2.7 per 100 live births in 1999 (Statistics Canada, 2002b); the Alberta rate was also 2.7 in 1999.

Data Sources

- Multiple births, live births: Vital Statistics Birth Registration files, Department of Government Services, January 2002 Release.

Multiple Births Trends and Effects

- The **multiple birth rate** (per 100 live births) fluctuated between 1.9 and 2.1 from 1986 to 1991, between 2.2 and 2.3 from 1992 to 1995, and increased more dramatically from 2.4 in 1996 to 3.0 in 2000 (see Table A1 and Figure 16).
  - In 2000, 95.9% of multiple live births were twin births; 4.1% were triplet births (see Table A51).
- Multiple birth rates by **maternal age** are provided in Table A52 (rates are not provided for mothers over 39 years prior to 1997, as there were too few multiple births in this age group to provide reliable rate estimates).

- In 2000, multiple birth rates varied from 1.4 for teenagers to 4.9 for mothers 40 years of age and older. Figure 17 shows the maternal age effect for 1998 to 2000 combined; the multiple birth rate increases linearly with increasing maternal age.
- Increasing multiple birth rates from 1986 to 2000 are limited to mothers aged 25 years and over: Linear trends are significant only for the 25-29, 30-34 and 35-39 age groups.

- The **low birth weight rate** was 51.5 per 100 live multiple births and 4.7 per 100 live singleton births in 2000 (see Table A53).
- The **pre-term birth rate** was 55.6 per 100 live multiple births and 7.0 per 100 live singleton births in 2000 (see Table A48).
- Multiple births for each of the **residence and facility RHAs** for 1986 to 2000 are detailed in Table A54..
  - Combined data for 1998 to 2000 for **residence RHAs** show that multiple birth rates vary with region (see Table A42). RHA 8 had a higher-than-average multiple birth rate, and RHAs 11 and 14 had lower-than-average multiple birth rates (see Map 10).
  - Rates for **facility RHAs** for 1998 to 2000 combined are also provided in Table A42. Note that *these rates must be interpreted with caution* due to the low number of cases involved
- Multiple pregnancies, multiple births and **perinatal deaths** of multiple births are detailed for 1999 and 2000 for each of the **facility RHAs** in Tables A55 and A56.
  - The perinatal death rate for multiple births was 39.9 (per 1,000 total multiple births) in 2000, and 55.0 in 1999.
- Time trends for 1986 to 2000 for multiple pregnancies, multiple births, and perinatal deaths of multiple births are shown in Table A57.
  - There is no significant linear or quadratic trend in perinatal deaths for multiple births from 1986 to 2000.

Figure 16.
Multiple Birth Rate
(per 100 live births),
Alberta, 1986 - 2000

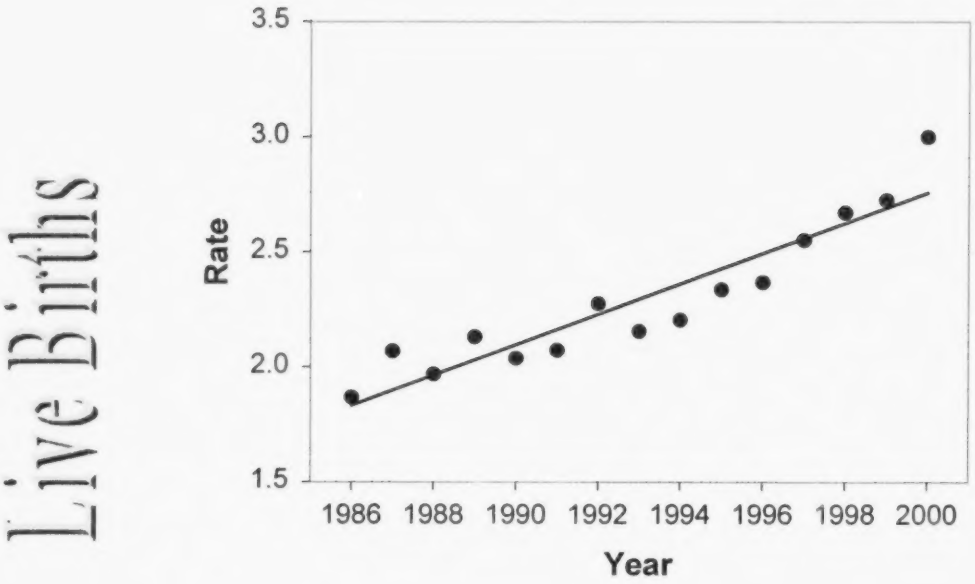
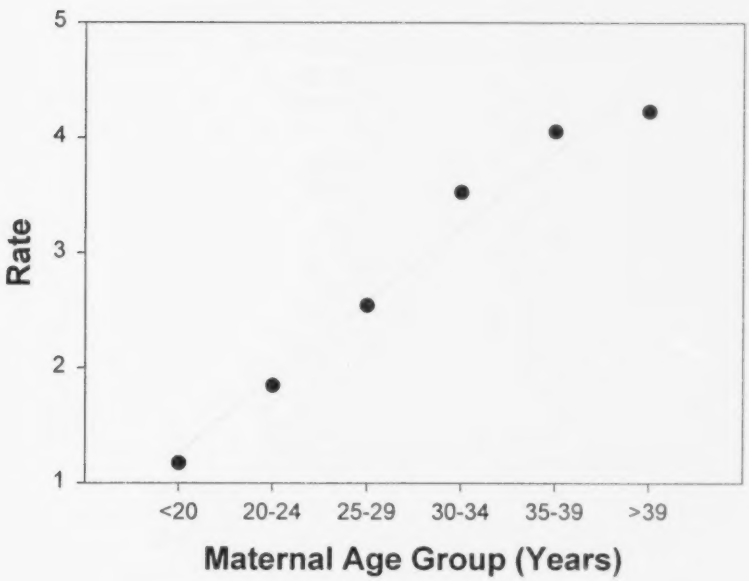
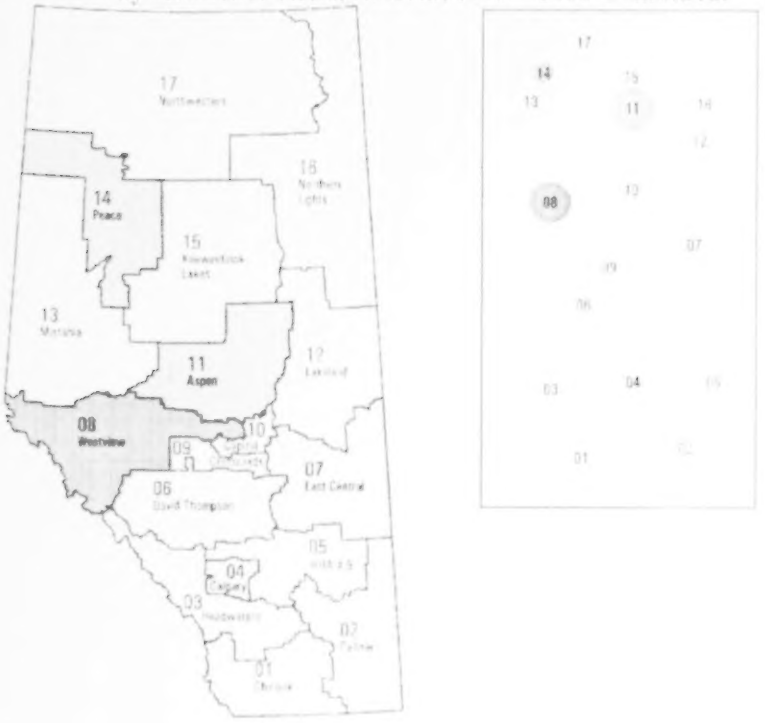


Figure 17.
Multiple Birth Rate
(per 100 live births)
by Maternal Age Group,
Alberta, 1998 - 2000 Combined



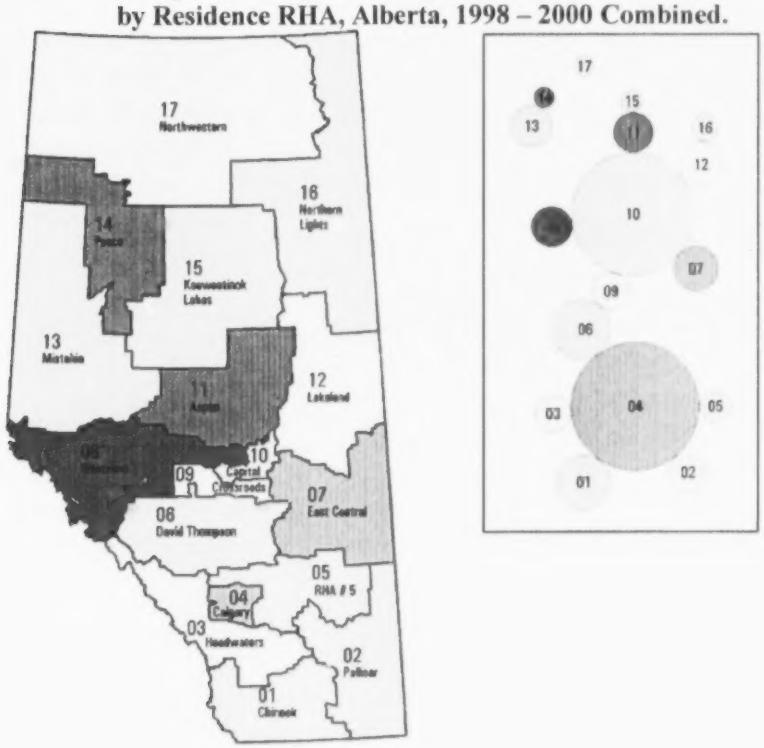
Live Births

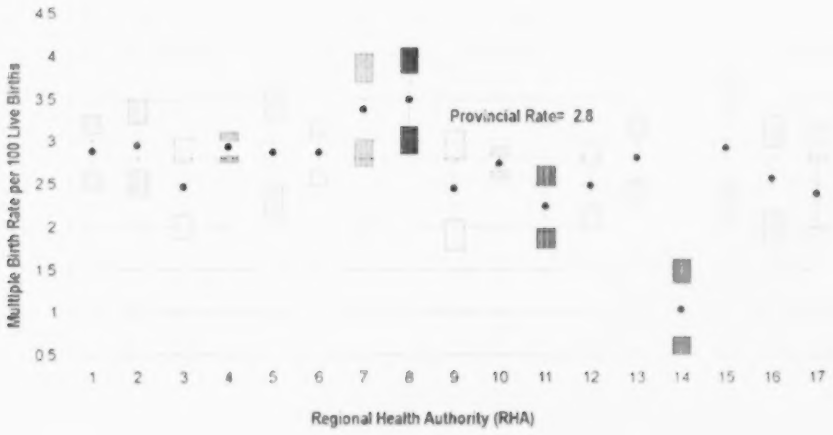
Map 10. Multiple Birth Rate (per 100 live births) by Residence RHA, Alberta, 1998 – 2000 Combined.



Live Births

Map 10. Multiple Birth Rate (per 100 live births) by Residence RHA, Alberta, 1998 – 2000 Combined.





Infant Morbidity

Definitions

- ***Respiratory distress syndrome:*** A lung disorder that causes difficulty in breathing; due to lack of surfactant in an infant's lungs. Respiratory distress syndrome results in a life-threatening deficiency of oxygen in the blood (Morgan, 1990).
  - ***Respiratory distress syndrome rate***: Number of cases of respiratory distress syndrome per 100 hospital deliveries in a given year.
- ***Congenital anomaly:*** Structural or chemical imperfection present at birth (Dorland, 2000).
  - ***Neural tube defects*** included in the following analyses are spina bifida, anencephaly and encephalocele; these disorders occur when the neural tube fails to close properly during early pregnancy.
    - ***Neural tube defect rate:*** Number of neural tube defects per 1,000 total births (total births includes live births and stillbirths) in a given year.
  - ***Heart septal defect***: A disorder of the heart in which the septum fails to develop properly, allowing deoxygenated blood to flow to the lungs (Morgan, 1990).
    - ***Heart septal defect rate:*** Number of heart septal defects per 1,000 total births (total births includes live births and stillbirths) in a given year.
  - ***Down syndrome:*** A chromosome disorder characterized by a small, anteroposteriorly flattened skull, short, flat-bridged nose, epicanthal fold, short phalanges, widened spaces between the first and second digits of hands and feet, and moderate to severe mental retardation. The chromosomal aberration is trisomy of chromosome 21 (Dorland, 2000).
    - ***Down syndrome rate:*** Number of cases of down syndrome per 1,000 total births (total births includes live births and stillbirths) in a given year.

Background

- Respiratory distress syndrome of the newborn primarily affects pre-term babies. It can be confused with transient tachypnea of the newborn, meconium aspiration, pneumonia, congenital heart disease, and asthmatic bronchitis. Early diagnosis and treatment of this condition is necessary to avoid serious complications, and thus to reduce infant morbidity and mortality.
- There is evidence that the risk of major congenital anomalies is elevated for infants conceived with assisted reproductive technologies (Hansen, Kurinczuk, Bower, & Webb, 2002).

- Infant mortalities due to congenital anomalies vary in frequency across Canada, in particular anencephaly and cardiovascular system anomalies (Wen, Liu, Joseph, Trouton, & Allen, 1999).
- Possible effects of neural tube disorders include miscarriage, stillbirth, infant or early childhood death, or lifelong disability (Health Canada, 2002b).
- More detailed information on congenital anomalies will be available from the report of the Alberta Congenital Anomalies Surveillance System, 1980-2000.

Data Sources

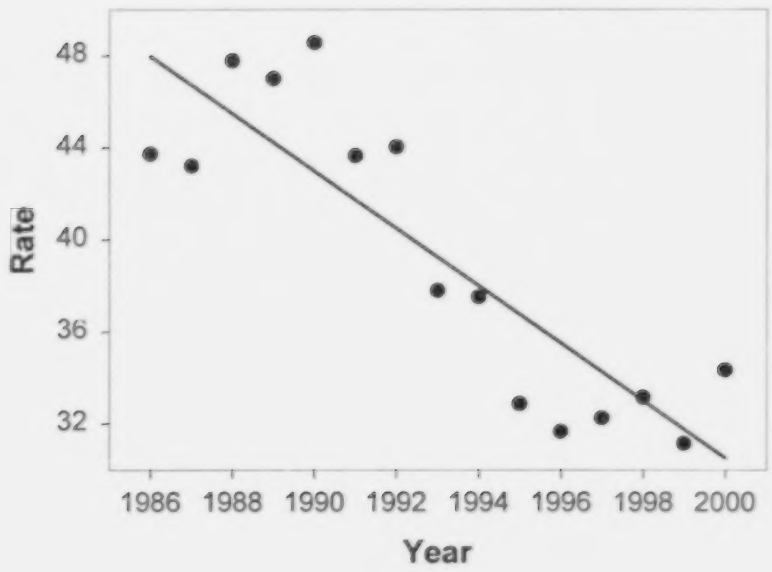
- Respiratory distress syndrome data: Fee-for-Service Claims Files, Ambulatory Care Classification System, and Canadian Institute of Health Information Inpatient Files, Alberta Health and Wellness.
  - ICD-9CM (International Classification of Disease-9th Revision-Clinical Modification) codes used are detailed in Appendix 2.
- Congenital Anomalies: Alberta Congenital Anomalies Surveillance System, 1980-2000, February 2002 release.
  - ICD-9CM (International Classification of Disease-9th Revision-Clinical Modification) codes used are detailed in Appendix 2.
  - Note that maternal age data for congenital anomalies are derived by linkage with Vital Statistics databases. Stillbirths are not available in these databases, so maternal age rates are calculated relative to live births only. Time trends do not require data linkage, and thus are calculated relative to total births (live births + stillbirths).
- Live births: Vital Statistics Birth Registration files, Department of Government Services, January 2002 Release.

Infant Morbidity Trends and Effects

- **Respiratory distress syndrome** resulted in the admission of 1.2% of newborns to hospital in 1999 and 2000 combined (874 cases).
- Table A58 shows the prevalence of selected **congenital anomalies** from 1986 to 2000.
  - When **all congenital anomalies** are combined into a single rate, the rate shows a significant linear decrease over the fifteen-year period (see Figure 18). The 2000 rate was 34.3 (per 1,000 total births).
    - The **neural tube defect rate** (per 1,000 total births) decreased slightly (though not significantly) from 1986 to 2000. The 2000 rate was 0.51.
    - The **heart septal defect rate** (per 1,000 total births) showed a significant linear decrease, with a 2000 rate of 4.25
    - The **Down Syndrome rate** (per 1,000 total births), on the other hand, increased significantly, and was 1.44 in 2000.

- The incidence of congenital anomalies varies with **maternal age** (see Table A59). Mothers who are 35 or older have a higher risk for congenital anomalies (see Figure 19), most notably for Down Syndrome. The recent trend of increased fertility for mothers aged 35 or older is worth noting in this context.
- Congenital anomalies rates also vary with **birth weight**: Anomalies increase in frequency with decreasing birth weight (see Table A60). More than 180 out of every 1,000 live births of less than 1,500 grams had congenital anomalies for 1985 to 2000 combined.
- Appendix 4 contains a short report on infant morbidity, including mention of shoulder dystocia.

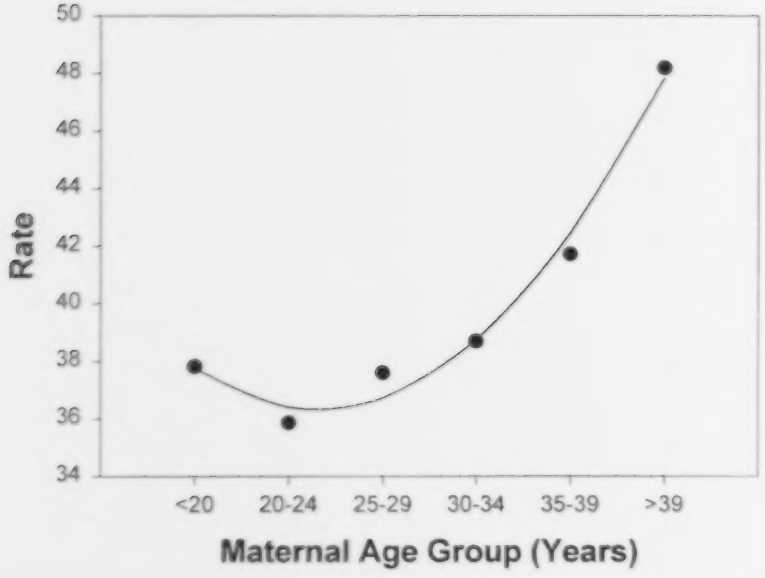
Figure 18.
Congenital Anomalies Rate
(per 1,000 total births),
Alberta, 1986 - 2000



Live Births

Live Births

Figure 19.
Congenital Anomalies Rate (per 1,000 live births) by Maternal Age Group, Alberta, 1998 - 2000 Combined



Mortality

Stillbirths

Definitions

- ***Stillbirths*** refer to births with the complete expulsion or the extraction from the mother after at least 20 weeks pregnancy, or after attaining a weight of 500 grams or more, of a fetus in which, after the expulsion or the extraction, there is no breathing, beating of the heart, pulsation of the umbilical cord or unmistakable movement of voluntary muscle (Alberta Vital Statistics Act, RHA 1980,cV-4 s1).
  - ***Stillbirth rate***: Number of stillbirths per 1,000 total births in a given year (total births is equal to the sum of live births and stillbirths).

Background

- Many risk factors for stillbirth have been identified, such as low maternal education, smoking during pregnancy, gender (stillbirths are more often male than female), prematurity, and low birth weight (Chen et al., 1998; Tough et al., 1999).
- There is a risk of recurrence for stillbirth (Oyen, Skjaerven, & Irgens, 1996).
- The **Canadian** stillbirth rate for 1999 was 6.1 (Statistics Canada, 2002b), compared with the Alberta rate of 6.8.

Data Sources

- Stillbirths: Vital Statistics Stillbirth Registration files, Department of Government Services, January 2002 Release, and Alberta Medical Association Committee on Reproductive Care.
- Live births: Vital Statistics Birth Registration files, Department of Government Services, January 2002 Release, Vital Statistics Annual Reviews, 1999 and 2000.

Stillbirths Trends and Effects

- There were 238 stillbirths in Alberta in 2000, resulting in a **stillbirth rate** of 6.5 (per 1,000 total births; see Table A1). The stillbirth rate did not vary systematically with time from 1986 to 2000.
- Stillbirth rates do vary significantly with **maternal age** (see Table A61). Stillbirths are more common with teenage mothers and with mothers 35 years old and older. The relationship between maternal age group and stillbirth rate is shown in Figure 20.
- Stillbirths and stillbirth rates by **birth weight** category appear in Table A62. Over the period 1986 to 2000, 73.3% of stillbirths were of low birth weight (<2,500 grams) and almost half (47.6%) were of extremely low birth weight (<1,000 grams). 24.6% of stillbirths weighed between 2500

and 3,999 grams, and just 2.1% of stillbirths were of high birth weight (≥4,000 grams) in that time period.

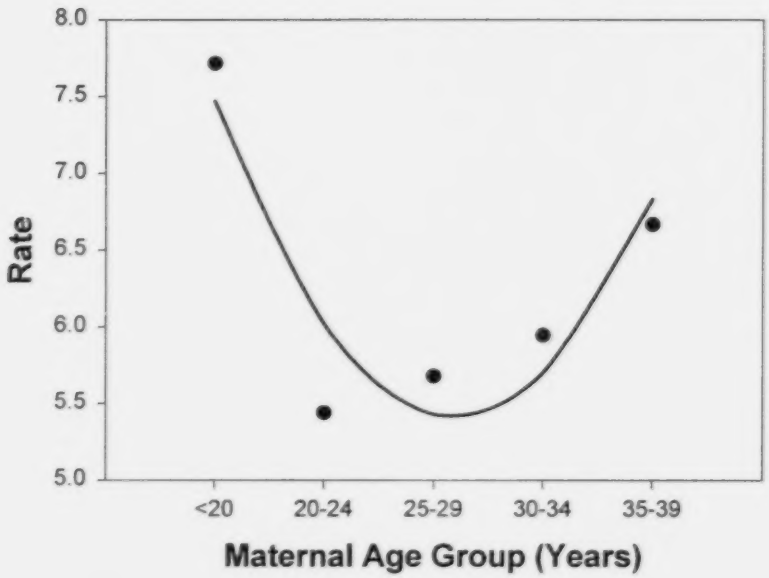
  - Table A63 provides a breakdown of 1999 and 2000 stillbirths by weight category, time of death (antepartum or intrapartum) and place of death (in hospital or prior to admission). Most stillbirths were antepartum, and occurred prior to hospital admission.

- Of all stillbirths occurring between 1986 and 2000, 72.4% were **pre-term** (see Table A64 for a yearly breakdown of pre-term, term, and post-term stillbirths).
- Stillbirths are far more common in **multiple births** than in singleton births. For 1986 to 2000 combined, the stillbirth rate (per 1,000 total births) was 6.1 for singleton births, and 22.7 for multiple births (see Table A65). Note that *the rates for multiple births must be interpreted with caution* due to the low number of cases involved.

Mortality

Mortality

Figure 20.
Stillbirth Rate
(per 1,000 total births)
by Maternal Age Group,
Alberta, 1998 - 2000 Combined



Perinatal and Neonatal Mortality

Definitions

- ***Perinatal deaths*** include stillbirths and early neonatal deaths (deaths before seven days of age). A fetal death is registered as a stillbirth in Alberta if delivery occurs at or after 20 weeks of pregnancy or if the fetal weight is 500 grams or greater and gestational age is not known.
  - ***Perinatal mortality rate***: Number of perinatal deaths per 1,000 total births in a given year (total births is equal to the sum of live births and stillbirths).
- A ***neonatal death*** occurs when an infant is born alive but dies before 28 days of age.
  - ***Neonatal mortality rate***: Number of neonatal deaths per 1,000 live births in a given year.

Background

Mortality

- The leading causes of neonatal death in Canada in 1995 were conditions originating in the perinatal period (including respiratory distress syndrome, pre-term birth, and low birth weight), and congenital anomalies (Health Canada, 2002c).
- The 1999 perinatal mortality rate was 9.1 in **Canada** (Statistics Canada, 2002b, 2002c), and 9.9 in Alberta.
- 1999 neonatal mortality rates were 3.6 in **Canada** and 3.7 in Alberta (Statistics Canada, 2002c).

Data Sources

- Stillbirths: Vital Statistics Stillbirth Registration files, Department of Government Services, January 2002 Release, Alberta Medical Association Committee on Reproductive Care.
- Mortalities: Vital Statistics Death Registration files, Department of Government Services, May 2001 Release, and Alberta Medical Association Committee on Reproductive Care.
- Live births: Vital Statistics Birth Registration files, Department of Government Services, January 2002 Release, and Vital Statistics Annual Reviews, 1999 and 2000.
- The Alberta Medical Association, through the Committee on Reproductive Care, reviews cases of perinatal, neonatal and maternal mortality.
  - Case information is received from the medical records departments of Alberta hospitals, hospital perinatal review committees, offices of medical examiners, vital statistics, and physicians. The Committee is designated by Ministerial Order to provide this service. Collaboration and cooperation from medical records staff, hospital perinatal review

committees and office of medical examiners help to ensure that case information is complete.

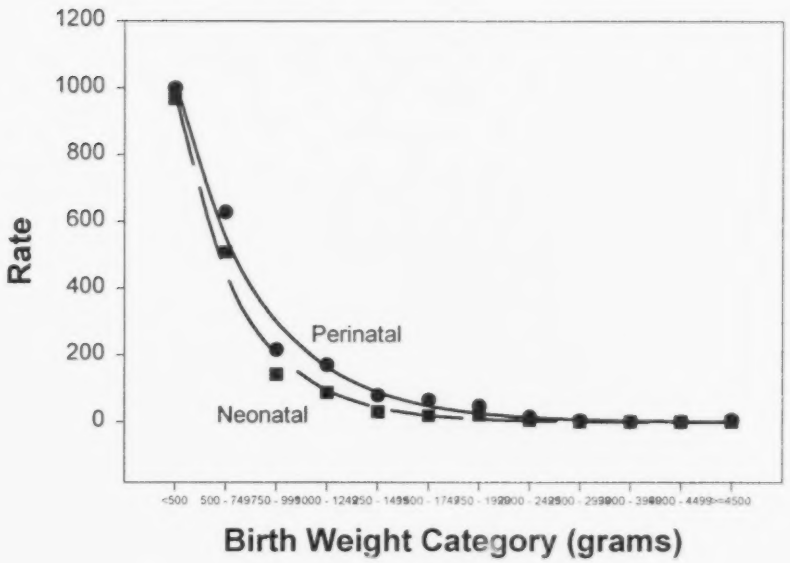
- Variables from case reviews are entered into a mortality database and form the basis for the mortality analysis part of this report.
- A validation process with vital statistics, Alberta Health and Wellness and medical records departments ensures that all cases are received for review.
- The mortality data include non-resident mothers who delivered in Alberta, but do not include babies born out-of-province who died in Alberta hospitals.

Perinatal and Neonatal Mortality Trends and Effects: Perinatal Mortality

- *Perinatal mortality rates reported below must be interpreted with caution* due to the low number of cases in many categories.
- The **perinatal mortality rate** for 2000 was 9.7 (per 1,000 total births; see Table A1).
- Perinatal mortality rates by **birth weight** are provided for 1999 and 2000 (Tables A66 and A67) and for 1996 to 2000 combined (Table A68, Figure 21). Rates decreased with increasing birth weight under 4,500 grams.
- Perinatal mortality rates by **gestational age** for 1999 and 2000 are in Tables A69 and A70. Rates for 1996 to 2000 combined are in Table A71. Perinatal mortality rates declined with increasing gestational age up to 41 weeks (see Figure 22).
- Perinatal mortality rates by **maternal age** for 1999 and 2000 appear in Table A72. Perinatal mortality rates were highest for mothers aged 35 and over.
- Perinatal mortality rates by **facility RHA** for 1999 and 2000 for infants with birth weights 500 grams and over are provided in Tables A73 and A74.
  - Detailed information on perinatal deaths by facility RHA for 1999 and 2000 appears in Tables A75 and A76. The perinatal mortality rate for 2000 for birth weights 500 grams and over was 6.9; the rate for birth weights 1,000 grams and over was 4.2. These rates were 4.8 and 2.9, respectively, when corrected for congenital anomalies. The number of cases is too small to make inter-regional comparisons.
- Perinatal mortality rates by **level of hospital** for 1999 and 2000 for infants with birth weights 500 grams and over are provided in Tables A77 and A78 (see Health Canada 2000b for definition of levels of hospitals). Rates were highest in Level III hospitals and lowest in Level I hospitals.

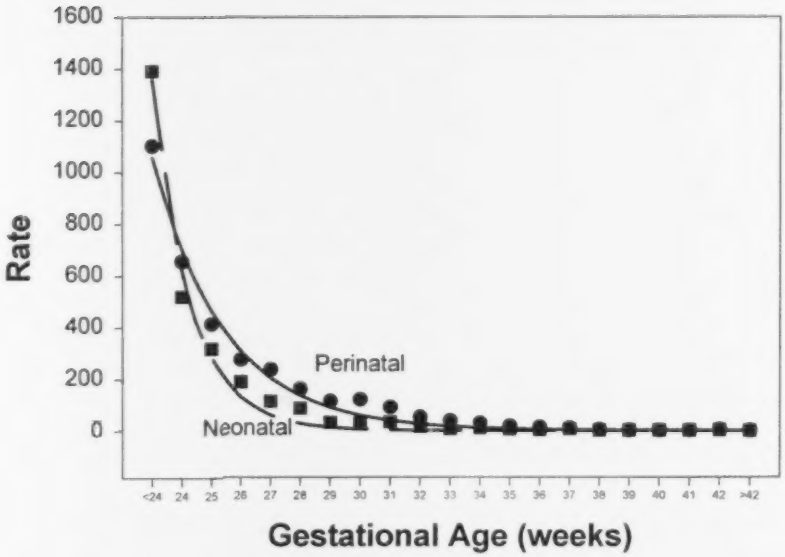
Mortality

Figure 21.
Perinatal Mortality Rate
(per 1,000 total births) and
Neonatal Mortality Rate
(per 1,000 live births)
by Birth Weight Category,
Alberta, 1996 - 2000 Combined



Mortality

Figure 22.
Perinatal Mortality Rate
(per 1,000 total births) and
Neonatal Mortality Rate
(per 1,000 live births)
by Gestational Age,
Alberta, 1996 - 2000 Combined



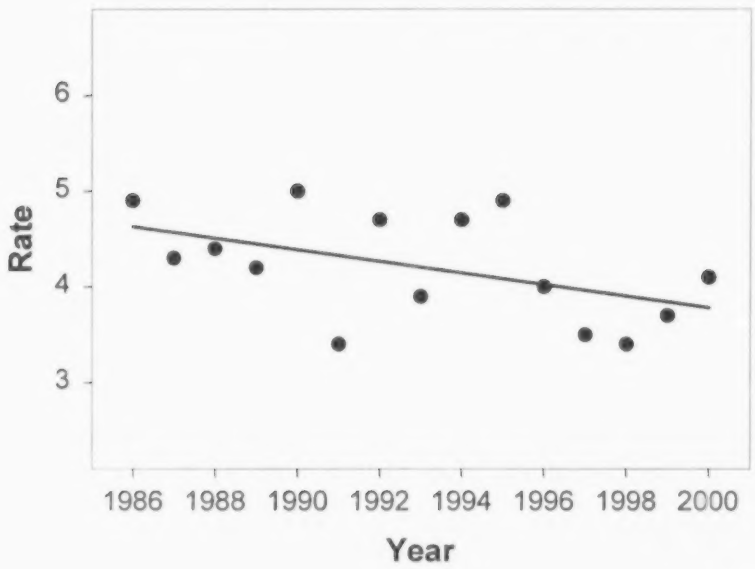
Perinatal and Neonatal Mortality Trends and Effects: Neonatal Mortality

- *Neonatal mortality rates reported below must be interpreted with caution* due to the low number of cases in many categories.
- The **neonatal mortality rate** (per 1,000 live births) was 4.1 in 2000 (see Tables A1 and A79, and Figure 23). There is a pattern of decline from 1986, though the rate increased in both 1999 and 2000. This rate will be watched to determine if the increases of the last two years are part of a trend.
- Neonatal mortality rates decrease with increasing **birth weight**; rates are provided for 1999 and 2000 (Tables A66 and A67) and for 1996 to 2000 combined (Table A68 and Figure 21).
- Neonatal mortality also decreases with increasing **gestational age**. Rates for 1999 and 2000 are in Tables A69 and A70 and rates for 1996 to 2000 combined are in Table A71 and Figure 22.
- Neonatal mortality rates by **maternal age** for 1999 and 2000 are shown in Table A72. Neonatal mortality rates increased with increasing maternal age, in general.
- Neonatal mortality rates for infants with birth weights of 500 grams and over by **facility RHA** for 1999 and 2000 appear in Tables A73 and A74.
  - Tables A80 and A81 provide detailed information on neonatal deaths for facility RHAs for 1999 and 2000.
    - The neonatal mortality rate in 2000 for infants weighing 500 grams or more at birth was 3.0 (per 1,000 live births); the rate for infants with birth weights of at least 1000 grams was 1.6. When corrected for congenital anomalies, the rates were 1.6 and 0.5, respectively. The number of cases is too small to make inter-regional comparisons.
- Neonatal mortality rates for infants with birth weights of 500 grams and over by **level of hospital** for 1999 and 2000 are in Tables A77 and A78. Rates were highest in Level III hospitals (see Health Canada 2000b for definition of levels of hospitals).
- Neonatal mortality rates by **residence and facility RHA** for 1998 to 2000 combined are in Table A82. The number of cases is too small to make inter-regional comparisons.

Mortality

Mortality

Figure 23.
Neonatal Mortality Rate
(per 1,000 live births),
Alberta, 1986 - 2000



Perinatal and Neonatal Mortality Trends and Effects:
Wigglesworth Classifications of Causes of Perinatal and Neonatal Deaths

- A summary of the Wigglesworth classification of causes of death for perinatal and neonatal deaths for 1996 to 2000 appears in Table A83.
  - Details for 1999 and 2000 are in Tables A84 and A85.
    - Group 1, Deaths before the start of labour: 23.7% of deaths were assigned to this category in 2000. Abruptio was a factor in 17.5% of these deaths, and 71.1% occurred before 37 weeks gestation. Table A86 contains further detail for 1999 and 2000 on this category.
    - Group 2, Lethal or potentially lethal malformations: This category accounted for 32.0% of deaths in 2000.
    - Group 3, Deaths associated with prematurity: Prematurity was associated with 26.7% of deaths in 2000. Of the deaths associated with prematurity, 95.4% had birth weights of less than 1000 grams, and 36.7% were intrapartum deaths. Table A87 contains further detail on this category for 1999 and 2000.
    - Group 4, Intrapartum Deaths, Neonatal deaths <4 hours old, Neonatal deaths >1000 grams and >4 hours old with evidence of cerebral birth trauma/asphyxia: This category accounted for 4.6% of deaths in 2000. In 26.3% of these cases, massive hemorrhage/abruptio placenta was a factor. Further details for 1999 and 2000 appear in Table A88.
    - Group 5, Defined specific condition: A specific condition was defined in 13.0% of the deaths for 2000. Antepartum deaths accounted for 71.7% of the deaths in 2000, intrapartum deaths 3.8% and neonatal deaths 24.5%. Cord anomalies/accidents were the most common defined condition. Table A89 contains data for 1996 to 2000 for deaths in this category.

Perinatal and Neonatal Mortality Trends and Effects:
Causes of Perinatal deaths

- Low birth weight, prematurity and congenital anomalies were strong predictors of perinatal mortality, as shown in Tables A68 and A71.
  - Of all perinatal deaths from 1996 to 2000, 76.7% were low birth weight, 74.6% were pre-term, and 27.6% had congenital anomalies.
  - Details on congenital anomalies as causes of perinatal deaths for 1999 and 2000 are in Table A90; Table A91 has congenital anomalies data for 1996 to 2000.
- For causes of antepartum deaths of babies weighing 2500 grams or more in 1999 and 2000, refer to Table A92.
  - The most common causes for 2000 were intrauterine asphyxia (40.4%), nuchal cord/true knot or cord occlusion (29.8%), and placenta abruptio/previa (12.3%).

Perinatal and Neonatal Mortality Trends and Effects:
Causes of Intrapartum/Neonatal deaths

- As with perinatal deaths, the neonatal mortality rate is strongly predicted by low birth weight, prematurity, and congenital anomalies (see Tables A68 and A71).
  - Of all neonatal deaths from 1996 to 2000, 76.2% were low birth weight, 71.2% were pre-term, and 38.7% had congenital anomalies.
    - Details on congenital anomalies as causes of neonatal deaths for 1999 and 2000 are in Table A90; Table A91 has congenital anomalies data for 1996 to 2000.
- Causes of death for intrapartum and neonatal deaths of babies who weighed 2500 grams or greater for 1999 and 2000 are found in Table A93.
  - In 39.1% of cases in 2000, the cause of death was undetermined; intrapartum hemorrhage was implicated in 26.1% of cases, and cord accidents in 21.7% of cases.
  - In each of these cases the fetus was considered to be alive at the start of labour, prior to and during induction of labour and/or cesarean section.

Post-Neonatal Mortality

Definitions

- A ***post-neonatal death*** occurs when an infant is born alive but dies between 28 days and one year of age.
  - ***Post-neonatal mortality rate***: Number of post-neonatal deaths per 1,000 live births in a given year.

Background

- The leading causes of post-neonatal mortality in Canada in 1995 were sudden infant death syndrome and congenital anomalies (Health Canada, 2002c).
  - Sudden infant death syndrome refers to the sudden and unexpected death of an apparently healthy infant under one year of age which remains unexplained after all known and possible causes have been ruled out through autopsy, death scene investigation and review of the medical history (Health Canada, 2002d).
- For 1999, the post-neonatal mortality rate was 1.6 in **Canada** and 2.0 in Alberta (Statistics Canada, 2002b).

Mortality

Data Sources

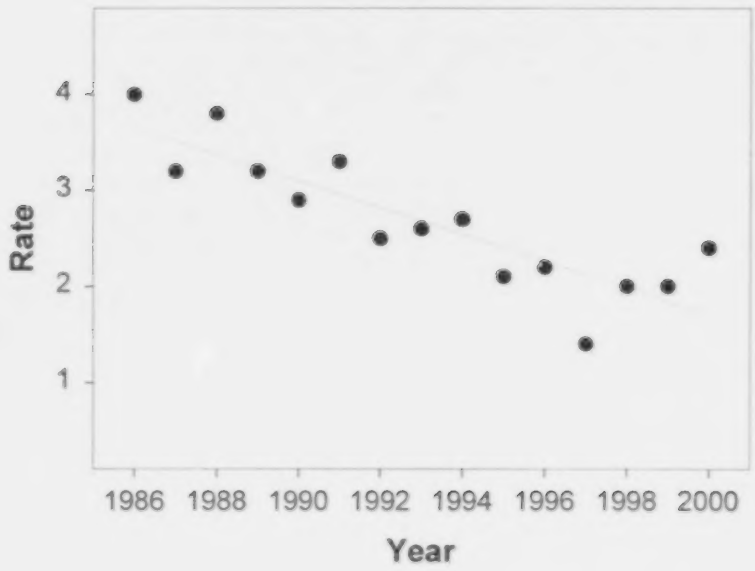
- Mortalities: Vital Statistics Death Registration files, Department of Government Services, May 2001 Release.
- Live births: Vital Statistics Birth Registration files, Department of Government Services, January 2002 Release.

Post-Neonatal Mortality Trends and Effects

- *Post-neonatal mortality rates reported below must be interpreted with caution* due to the low number of cases in many categories.
- The **post-neonatal mortality rate** (per 1,000 live births) was 2.4 in 2000. Although post-neonatal mortality rates declined over the period between 1986 and 2000 (see Figure 24), the 2000 rate was the highest since 1994 (see Tables A1 and A79).
- Post-neonatal mortality rates by **residence and facility RHA** for 1998 to 2000 combined are in Table A82. The number of cases is too small to make inter-regional comparisons.

Mortality

Figure 24.
Post-Neonatal Mortality Rate
(per 1,000 live births),
Alberta, 1986 - 2000



Infant Mortality

Definitions

- An ***infant mortality*** occurs when an infant dies before reaching 12 months of age. This includes neonatal and post-neonatal deaths.
  - ***Infant mortality rate***: Number of infant deaths per 1,000 live births.

Background

- Infant mortalities are more likely to occur with low maternal education, low or high maternal age, low birth weight, and pre-term birth; infant mortality is also more common in males (Chen et al., 1998; Nault, 1997).
- Maternal smoking in singleton births has been associated with an infant mortality rate nearly double that of nonsmokers (Pollack, Lantz, and Frohna, 2000).
- Alberta's infant mortality rate was 5.8 in 1999, compared to a **Canadian** rate of 5.3 (both figures from Statistics Canada, 2002b).
  - Infant mortality rates in Canada have declined substantially over the last few decades, with decreases in deaths due to perinatal conditions, congenital anomalies, and external causes. Regional and socioeconomic disparities in infant death rates have also diminished (Wilkins & Houle, 1999; Dzakpasu, Joseph, Kramer, & Allen, 2000).

Mortality

Data Sources

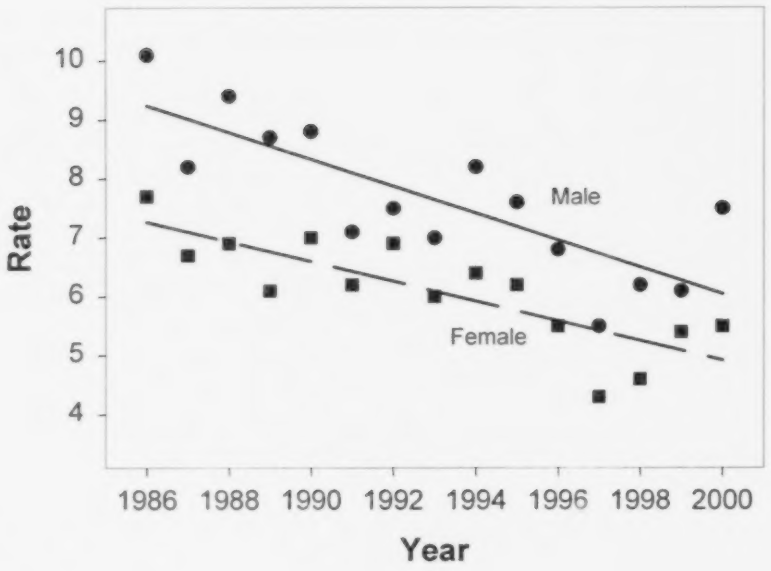
- Mortalities: Vital Statistics Death Registration files, Department of Government Services, May 2001 Release.
- Live births: Vital Statistics Birth Registration files, Department of Government Services, January 2002 Release.

Infant Mortality Trends and Effects

- From 1985 to 1996, the **infant mortality rate** (per 1,000 live births) fluctuated, but the rate decreased overall (see Tables A1 and A79). The rate decreased more dramatically from 1996 to 1999. The 2000 rate was 6.5, however, which is the highest rate since 1993.
- Infant mortality rates by **gender** from 1986 to 2000 are shown in Table A94. The rate for females has been lower than that for males each year during the fifteen-year study period (see Figure 25).
- Infant mortalities for **residence and facility RHAs** appear in Table A95; rates are not provided due to the low number of cases.
  - Combined data for 1998 to 2000 are in Table A82. Map 11 shows the rates for residence RHAs. The infant mortality rate was significantly lower than the provincial average in RHA 4, and higher than the provincial average in RHAs 15 and 17.

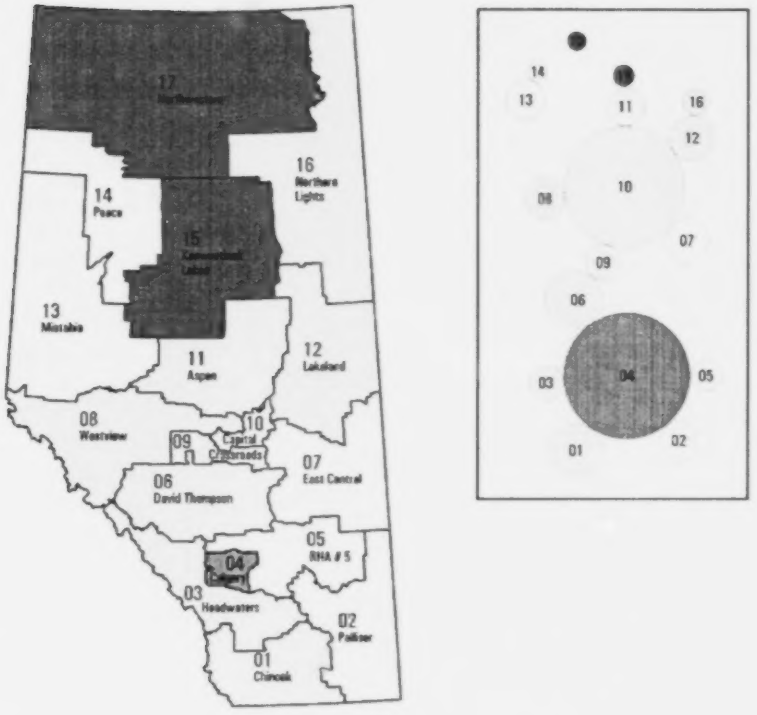
Mortality

Figure 25.
Infant Mortality Rate
(per 1,000 live births)
by Gender,
Alberta, 1986 - 2000



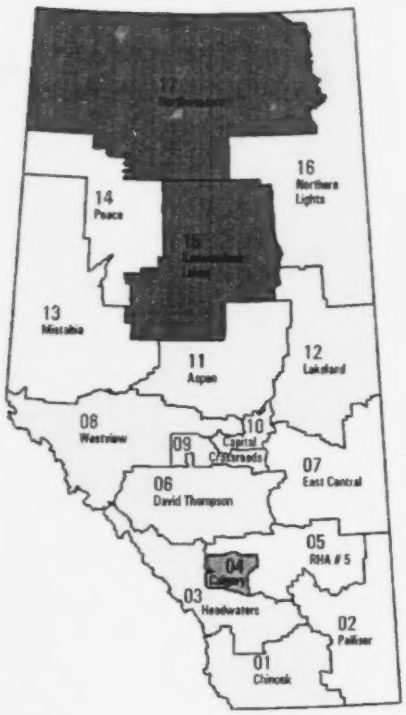
Mortality

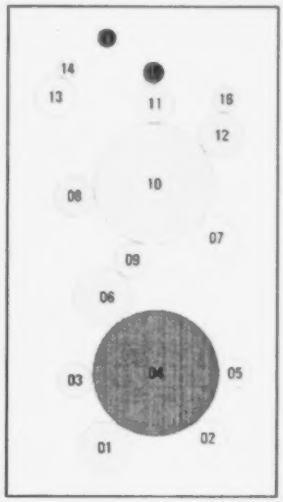
Map 11. Infant Mortality Rate (per 100 live births) by Residence RHA, Alberta, 1998 – 2000 Combined.



Mortality

Map 11. Infant Mortality Rate (per 100 live births) by Residence RHA, Alberta, 1998 – 2000 Combined.





Map 11. Infant Mortality Rate (per 100 live births)
by Residence RHA, Alberta, 1998 – 2000 Combined.

Maternal Mortality

Definitions

- The AMA Committee on Reproductive Care reviews reported maternal deaths that occur during pregnancy and up to 90 days post-delivery. These deaths are classified according to the Council on Medical Service, American Medical Association, Committee on Maternal And Child Care, A Guide for Maternal Death Studies (1964). This classification includes three categories:
  - ***Direct obstetric deaths***: Maternal deaths resulting from complications of pregnancy, childbirth or puerperium including intervention, omission, incorrect treatment, or from chain of events resulting from above.
  - ***Indirect obstetric deaths***: Maternal deaths resulting from previous existing diseases or diseases that developed during pregnancy, childbirth or the puerperium which are not due to a direct obstetric cause.
  - ***Unrelated deaths***: Maternal deaths not related to pregnancy, childbirth or puerperium, but occurring within the defined time frame.
- ***Maternal mortality rate***: Number of maternal deaths per 10,000 live births in a given year.

Mortality

Background

- The maternal mortality rate is low in **Canada** but has stabilized over the last two or three decades. Rates are somewhat higher in the United States; see Hoyert, Danel, & Tully (2000) for a discussion of maternal mortality in the United States and Canada.

Data Sources

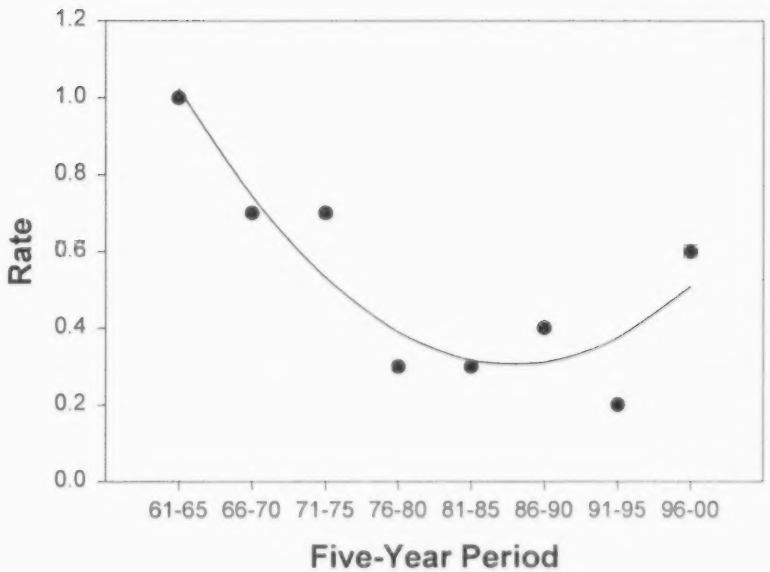
- Maternal mortality data : Alberta Medical Association Committee on Reproductive Care.
- Live births: Vital Statistics Annual Reviews, 1999 and 2000.

Maternal Mortality Trends and Effects

- **Maternal mortality rates** in Alberta are minimal. Both direct and indirect maternal mortality rates have declined significantly over time (see Table A96 and Figure 26).
  - Rates have stabilized since the 1976-80 time period. The 1996 and 1998 maternal mortality rates were anomalously high, however. These rates will be watched to determine whether a trend is developing.
  - In 2000, no maternal deaths were reported in Alberta.

Maternal Factors

Figure 26.
Maternal Mortality Five-Year Rate
(per 10,000 live births),
Alberta, 1961-1965 to 1996-2000



Maternal Factors

Number of Singleton Live Births to Mothers

Definitions

- ***Number of singleton live births to a mother***: Number of live births per mother, excluding multiple births and births to mothers who have had a stillbirth.

Background

- In **Canada** between 1979 and 1998, the rate of first births showed a steep decline for women aged 15 to 24 years, while the first birth rate increased for mothers aged 30 to 39 years.
  - The average age at first birth in Canada rose from 24.9 years in 1979 to 26.8 years in 1998.
  - This postponement of childbearing has not yet resulted in fertility rates for older mothers that offset the decline in fertility for younger mothers; the net result is an overall drop of 8% in fertility rates for primiparous women between 1979 and 1998 (Statistics Canada, 2001).
- Lifetime fertility rates, which represent the average number of children that a single generation of women had, have stabilized at about 1.8 children per woman in Canada (Statistics Canada, 2001).

Data Sources

- Live births: Vital Statistics Birth Registration files, Department of Government Services, January 2002 Release.

Number of Singleton Live Births to a Mother Trends and Effects

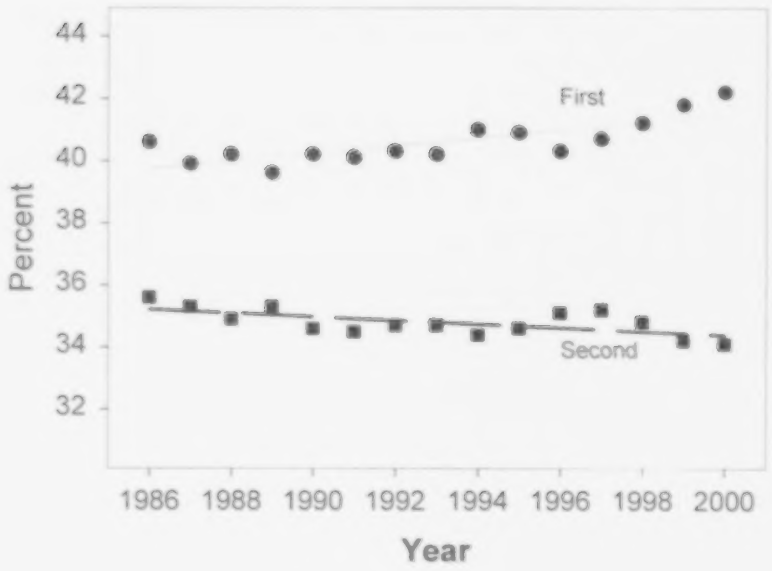
- Live births by **number of singleton live births to a mother** (excluding mothers who have had a stillbirth) appear in Table A97. In 2000, 42.2% of live births were first live births, 34.1% were second live births, 14.8% were third live births, and the remaining 8.8% were fourth or later live births.
  - The **percent of live births** that were first births showed a small but significant increasing trend from 1986 to 2000.
    - Percent of live births for second and third births showed small but significant decreases over the fifteen-year study period. The time trends for first and second births are shown in Figure 27.
    - The linear time trend was not significant for fourth births, but there were small, significant increases for fifth and subsequent births.
  - **Fertility rates** (per 1,000 women aged 15-49) do vary with time between 1986 and 2000.

- There is a significant decrease in fertility rate over time for live singleton births of orders 1 to 5. For example, in 1986, 22.5 out of every 1,000 women aged 15 – 49 years had a first live birth. In 2001, this figure had decreased to 16.8.

- Table A98 provides a number of **indicators of reproductive health**, broken down by number of singleton live births to mothers and combined for the years 1998 to 2000. Note that only singleton live births of order 1 through 4 are included in this table.
  - **First babies are smaller** than subsequent babies.
    - Mean birth weight for first live births was 3,426 grams, and 3,518 for second live births.
    - The low birth weight rate is lowest for infants born to mothers with two or three live singleton births.
    - Small for gestational age babies are more likely to be first live births than subsequent births.
    - The high birth weight rate increases with number of live singleton births to a mother.
    - Large for gestational age babies are much less likely to be first births than second or later births.
  - The **pre-term birth rate** is elevated for first and fourth live births.
  - Having a **midwife** as the primary birth attendant increases in frequency with number of live singleton births to a mother.
  - Overall, the indicators are most positive for second-borns.

Maternal Factors

Figure 27.
First and Second Births
(per 100 live births),
Alberta, 1986 - 2000



Maternal Postnatal Morbidity

Definitions

- ***Shoulder dystocia:*** Dystocia is defined as abnormal or difficult labour due to the shape, size or position of the fetus (Dorland, 2000). In the case of shoulder dystocia, there is often an impaction of the anterior shoulder of the fetus against the symphysis pubis after the head has been delivered.
- ***Postpartum hemorrhage:*** Excessive blood loss after childbirth. May occur immediately after delivery or may be delayed by days or weeks (Morgan, 1990). For the data presented below, postpartum hemorrhage was defined as loss of more than 500 ml of blood during the first 24 hours after vaginal delivery or loss of more than 1000 ml of blood after cesarean section.
- ***Depression:*** A mental state of depressed mood characterized by feelings of sadness, despair, and discouragement. Depression ranges from normal feelings of "the blues" through dysthymic disorder to major depressive disorder (Dorland, 2000).
  - ***Postpartum depression:*** The standard diagnostic criterion for postpartum depression is that occurring within four weeks of delivery, however many clinicians use longer timeframes in practice (Miller, 2002). In the analyses below, we looked at diagnoses of depressive disorders occurring within 1 month, 6 months, 1 year and 2 years after birth, in comparison with levels in the 40 weeks prior to delivery.
  - A variety of conditions was classified as depressive disorders: About 70% of depressive disorders were classified as depressive disorders not otherwise specified, followed by dysthymia (22%), depressive reaction (5%), major depression (2%), and the remainder of the diagnostic categories (1%).
- ***Rates*** for the above conditions are per 100 hospital deliveries.
- Maternal postnatal morbidity that is not recognized or has not resulted in contact with insured medical services cannot be accounted for. Thus, maternal postnatal morbidity rates reported here represent an underestimation of the true rates.

Background

- Shoulder dystocia is a life-threatening emergency, and is often associated with maternal obesity, diabetes, fetal macrosomia, and prolonged labor. It is a major indication for C-section.
- Postpartum hemorrhages account for the majority of serious postpartum complications within the first 24 hours after delivery (Roberts, 1995). Uterine atony, retained placenta, obstetric trauma, and abnormal coagulation are common causes.
- Postpartum depressive disorders are complicated phenomena, with severity ranging from mild "blues" to non-psychotic major depression to psychosis.

Both physiological and environmental factors can contribute to the development of postpartum depression (Miller, 2002).

Data Sources

- Maternal postnatal morbidity data: Fee-for-Service Claims Files, Alberta Health and Wellness, Ambulatory Care Classification System, Alberta Health and Wellness, Canadian Institute of Health Information Inpatient Files, Alberta Health and Wellness.
  - ICD-9CM (International Classification of Disease-9th Revision-Clinical Modification) codes used are detailed in Appendix 2.
- Population estimates: Alberta Health Care Insurance Plan Stakeholder Registration File, Alberta Health and Wellness.

Maternal Postnatal Morbidity Trends and Effects

- Data described below appear in Table A99.
- The incidence of **shoulder dystocia** in Alberta in 1999 and 2000 combined was 3.3 (per 100 hospital deliveries).
  - Appendix 4 contains a short report on infant morbidity, including mention of shoulder dystocia and increasing birth weights.
- **Postpartum hemorrhage** was documented in 16.5 out of every 100 hospital deliveries in 1999 and 2000 combined.
- **Depression** following childbirth is a relatively common occurrence.
  - Prior to giving birth, 2.5 out of every 100 women delivering had a diagnosis of depressive disorder for 1999 and 2000 combined.
  - Prevalence varied over the two-year period following delivery, as shown in the following data for 1999 and 2000 combined.
    - At one month postpartum, 2.2% of women were diagnosed with a depressive disorder. The rate was 7.4% when the first six months postpartum were considered, and 12.8% for the first twelve months. If the first 24 months postpartum are considered, 16.7% of women delivering had been diagnosed with a depressive disorder.
    - Thus, when prenatal prevalence and postpartum prevalence up to 24 months after birth are considered together, 19.2% of women were diagnosed with some form of depression.

Maternal Postnatal Behaviours

Definitions

- ***Breastfeeding*** occurs when a child "has received breast milk (direct from the breast or expressed)" (World Health Organization, 1991).
  - ***Breastfeeding initiation rate***: Number of women per 100 hospital deliveries who were breastfeeding when discharged from hospital after giving birth.

Background

- Breastfeeding benefits are well-documented, including (but not limited to) protection from infection and enhanced cognitive development in infants, and reduced post-partum bleeding and delayed resumption of ovulation in mothers (Health Canada, 2000a).
- The World Health Organization recommends exclusive breastfeeding up to 6 months of age, and continuation of supplemented breastfeeding up to two years of age and beyond (World Health Organization, 2001; World Health Organization/UNICEF, 1990).
  - "Exclusive breastfeeding is defined as no other food or drink, not even water, except breast milk, …but allows the infant to receive drops and syrups (vitamins, minerals and medicines)." (World Health Organization, 2002).
- Postpartum smoking has been linked to early cessation of breastfeeding (Ratner, Johnson, & Bottorff, 1999), as has exposure to material promoting formula feeding (Howard, Howard, Lawrence, Andresen, DeBlieck, & Weitzman, 2000).
- Early introduction of solid foods has been associated with the development of allergies, iron deficiency, and hypernatremic dehydration (Kwavnick, Reid, Joffres, & Guernsey, 1999).
- In **Canada** in 1997, the breastfeeding initiation rate was 76.7 (per 100 children; Health Canada, 2000a). There is an east-to-west gradient of breastfeeding initiation, with lowest rates in the Maritimes and highest rates in the western provinces.

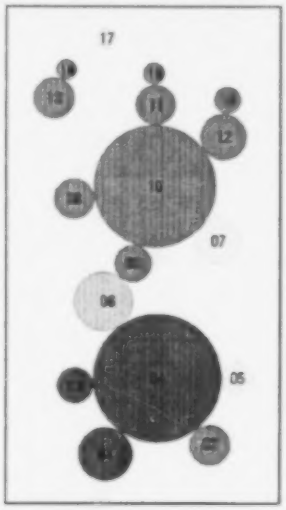
Data Sources

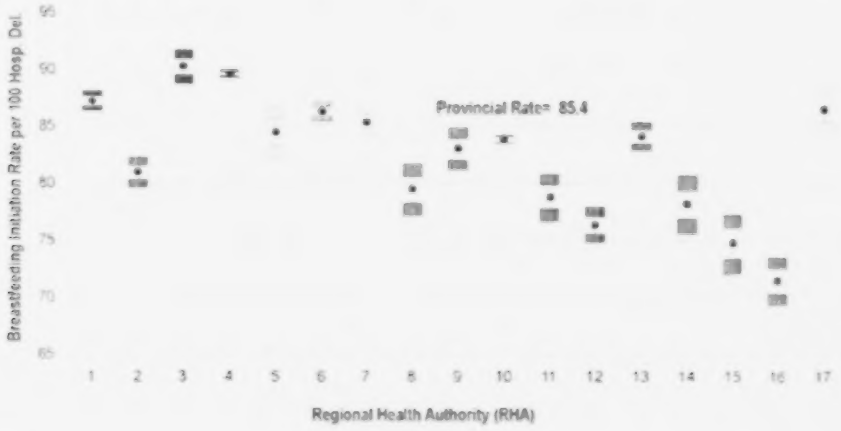
- Breastfeeding initiation data: Alberta Medical Association Committee on Reproductive Care.

Postnatal Behaviours: Trends and Effects

- **Breastfeeding initiation rates** for 1996 to 2000 appear in Table A100. The rate of breastfeeding initiation increased slightly over this five year period.
  - In 2000, 86.6% of women were breastfeeding upon discharge from hospital after giving birth, up from 83.1% in 1996.
- Table A101 shows breastfeeding upon discharge by **facility RHA** from 1998 to 2000.
  - Breastfeeding initiation rates for 1998 to 2000 combined were higher than the provincial average for women delivering in RHAs 1, 3, and 4, and lower than the provincial average in RHAs 2, 8, 9, 10, 11, 12, 13, 14, 15, and 16 (see Map 12).

Map 12. Breastfeeding Initiation Rate (per 100 hospital deliveries) by Facility RHA, Alberta, 1998 – 2000 Combined.





Map 12. Breastfeeding Initiation Rate (per 100 hospital deliveries) by Facility RHA, Alberta, 1998 – 2000 Combined.

Maternal Factors

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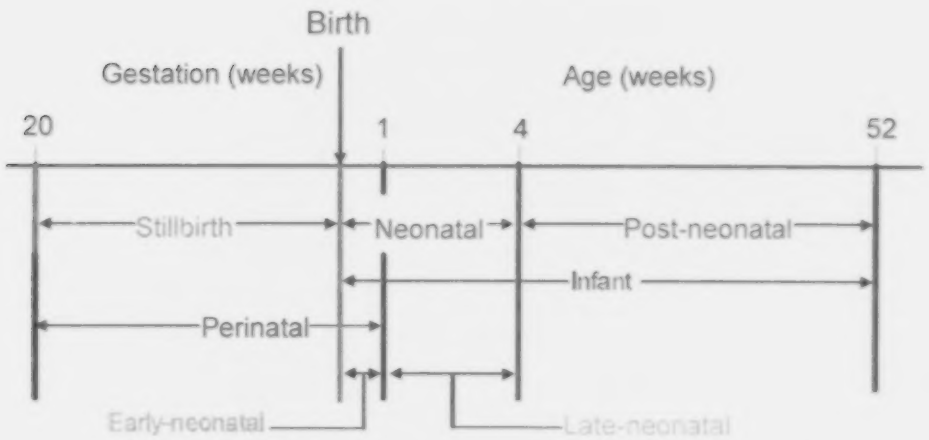
Appendices

Appendix 1:
Definition of Stillbirth and Infant Death



Stillbirth	: at least 20 weeks of gestation or after attaining a weight of 500 g.
Early-neonatal mortality	: deaths occuring before 7th full day after birth.
Perinatal mortality	: stillbirths of at least 20 weeks of gestation and early-neonatal deaths.
Late-neonatal mortality	: deaths between 7th full day and 28th full day of life.
Neonatal mortality	: deaths occuring within 28 days after birth.
Post-neonatal mortality	deaths between the 4th full week and the 52nd full week.
Infant mortality	: deaths occuring within the first year of life.

Appendix 2: Codes Used for Data Extraction

Induced Abortion
Induced abortion data were extracted from Fee-For-Service Claims Files using the following health service codes: 86.41, 87.0, 87.0A, 87.1, 87.21.

International Classification of Disease – 9th Revision – Clinical Modification (ICD-9-CM) Codes

Spontaneous abortion
Diagnostic code 634

Hospital Delivery
Diagnostic Codes

640-648:	Complications mainly related to pregnancy	
Fifth digit:	1	Delivered, with or without mention of antepartum condition
	2	Delivered, with mention of postpartum complication
650:	Delivery in a completely normal case	
651-659:	Other indications for care in pregnancy, labour and delivery	
Fifth digit:	1	Delivered, with or without mention of antepartum condition
	2	Delivered, with mention of postpartum complication

V Code

V27:	Outcome of delivery

Induction of labour
Procedure Codes

73.4:	Medical induction of labour
73.01:	Induction of labour by artificial rupture of membranes
73.1:	Other surgical induction of labour

Operative Delivery
Procedure Codes

74:	Cesarean section and removal of fetus (7491 (hysterotomy to terminate pregnancy) was excluded).
72.0:	Low forceps operation
72.1:	Low forceps operation with episiotomy
72.2:	Mid forceps operation
72.21:	Mid forceps with episiotomy
72.29:	Other mid forceps operation
72.3:	High forceps operation

72.31:	High forceps operation with episiotomy
72.39:	Other high forceps operation
72.7:	Vacuum extraction
72.71:	Vacuum extraction with episiotomy

Respiratory distress syndrome
Diagnostic code 769

Congenital Anomalies
Diagnostic Codes

740.0-742.0	Neural Tube Defects
745.0-745.9	Heart Septal Defect
758.0	Down Syndrome

For "All congenital anomalies combined" analyses, the following diagnostic codes were included:
Congenital Anomalies within ICD-9 740.0-759.9:

740.0-742.9	Nervous System Anomalies
743.0-743.9	Eye Anomalies
744.0-744.9	Ear, Face and Neck
745.0-747.9	Cardiovascular System Defect
748.0-748.9	Respiratory System Anomalies
749.0-751.9	Digestive System Anomalies
752.0-752.9	Genital Organ Anomalies
753.0-753.9	Urinary System Anomalies
754.0-756.9	Musculoskeletal Anomalies
757.0-757.9	Integument Anomalies
758.0-758.9	Chromosomal Anomalies
759.0-759.9	Other and Unspecified Anomalies

Congenital Anomalies/Disorders Outside ICD-9 740.0-759.9:

140-239	Neoplasm
243.9	Congenital Hypothyroidism
255.2	Adrenogenital Disorders
270	Amino Acid and Organic Acid Disorders
271	Disorders of CHO Transport and Metabolism
275	Disorders of Mineral Metabolism
277.00	Cystic Fibrosis
282	Hereditary Hemolytic Anemias
343 (including 342, 344)	Cerebral Palsy
348.0	Cerebral Cysts
760.76	Fetal Alcohol Syndrome

Shoulder dystocia
Diagnostic Code 640.1

Postpartum hemorrhage
Diagnostic Code 666

Depression
Diagnostic Codes

296.2-3	Major depression
298.0	Depressive-type psychosis
300.4	Dysthymic disorder
301.1	Affective personality disorder
309.0-1	Depressive reaction
311	Depressive disorder, NOS
313.1	Misery and unhappiness disorder

Appendix 3: Epidemiologic Measures for Maps

Dr. Donald Schopflocher and Erik Ellehoj

All health events reported in this document are mapped according to the method described below. This method was developed to address the issue of how population sizes of health regions can affect rate stability. Specifically, rates will be less stable for RHAs with small populations than those for RHAs with larger populations. The mapping method used in this report is designed to address this issue and allow statistically consistent interpretations. (As an example the numbers shown in the calculations in Steps 1, 2 and 3 below are for low birth weight babies born in the Chinook, Palliser and Northwestern health regions and compared against provincial rates from 1994 to 1996.)

The mapping method consists of the following seven steps:

1. Calculate the rates for each region. For crude rates, an example of this calculation is shown below. *Note: where sex- age standardized rates are used a more detailed calculation would be required.*

Health Region #	Low Birth Weight (LBW)	Total Births	Proportion LBW
1	189	3,453	0.05
2	183	3,069	0.06
.	.	.	.
.	.	.	.
.	.	.	.
17	65	1,557	0.04

2. Calculate the rate for the province. For crude rates, an example of this calculation is shown below. *Note: where sex- age standardized rates are used a more detailed calculation would be required.*

Number of low birth weight newborns: 6,726
Total number of live births: 113,252
Proportion low birth weight: 6,726 / 113,252 = 0.059

3. Calculate standard error of a probability of a health event for each regional rate. For crude rates the formula which follows can be used. *Note: where sex- age standardized rates are used a more detailed calculation would be required.*

$$\sqrt{\frac{p(1-p)}{n}}$$

Where: p is the proportion (estimate of probability) for the region
n is the number of births.

Health Region #	Low Birth Weight	Total Births	Proportion LBW	Calculation	Standard Error
1	189	3,453	0.05	$\sqrt{\frac{0.05(1-0.05)}{3,453}}$	0.0038
2	183	3,069	0.06	$\sqrt{\frac{0.06(1-0.06)}{3,069}}$	0.0037
.	.	.	.	.	.
.	.	.	.	.	.
.	.	.	.	.	.
17	65	1,557	0.04	$\sqrt{\frac{0.04(1-0.04)}{1,557}}$	0.0051

4. Calculate the regional-specific standard scores.

Subtract the regional proportion from the provincial proportion and divide these by the standard error derived for each region in step 3. Repeat for each region.

$$\frac{\text{regional proportion} - \text{provincial proportion}}{\text{regional standard error}}$$

5. Graph the regional-specific standard scores calculated in Step 4.

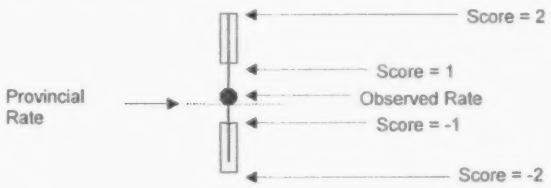
The following colour scheme is used to differentiate the rates that may differ from the provincial average.

Score	Interpretation	Colour
≥ 2	Higher than provincial average (significant difference in a conventional statistical test ($p<0.05$)	Red
≥ 1 and < 2	probably higher than provincial average ($p > 0.5$ but < 0.95 that difference is not due to random variation)	Orange
< 1 and	Not likely to differ from provincial average ($p< 0.5$ that difference is not due to random variation)	Yellow

> -1		
≤ -1 and > -2	Probably lower than provincial average ($p > 0.5$ but < 0.95 that difference is not due to random variation)	Light green
≤ -2	Lower than provincial average (significant difference in a conventional statistical test ($p<0.05$)	Dark green

The figure below illustrates how to interpret the graphic for an individual region. The yellow bars are used to show that the provincial rate crosses between the 1 and –1 score range. The table above lists other colour possibilities by score category.

The black dot represents the value of the rate for each region. The colour of the bars above and below the dot represents the score of the region. The portion of the bar closest to the black dot represents the value for a standard score of 1 or –1, while the part of the bars farthest from the dot represent the value for a score of 2 or –2.



6. Generate maps using the same categories for each region as listed in Step 5.

The graph and map are placed in the same page. The map allows the reader to obtain a quick overview while more detailed information is presented on the graph . The colour assigned to each region is based on the colour of the bars in the graph for the same region. This provides a spatial context to the distribution patterns and consistency among the two graphic elements.

7. Generate a cartogram.

A cartogram is similar to a map. However, each region is represented by a circle that is sized proportionately to the regional population. This graphic is useful for interpreting reported rates by providing an indication of the population size of each region. Each RHA in the cartogram is coloured the same as it is on the provincial map.

Appendix 4: Morbidity Report on Birth Weight and Brachial Plexus Injury in Alberta

Dr. C. Robertson, Dr. J. Watt, Glenrose Rehabilitation Hospital

Birth Weight for Gestational Age: Alberta

Increased birth weight among singleton term newborns in Canada has been reported over the past three decades. Wadhera et al[1] demonstrated an increase of 3.1% from 1971 to 1989. Arbuckle and Sherman[2] reported a similar increase between 1972 and 1986. A recent Alberta study of births from 1985 through 1998 shows an increase in birth weight over this period with singleton infants of 38 weeks gestation and beyond having birth weights significantly greater in later than earlier years.[3] There was no increase in the birth weight by gestation age for preterm or twin infants during the period.[3] While the reason for this increase is unclear, current literature has speculated on the consequences of increased birth weight, including cephalopelvic disproportion,[4,5] fetal macrosomia syndromes,[6] adiposity in the first year of life,[7] and childhood obesity.[8]

We trust that the documentation of increased birth weight for gestational age for term newborns in Alberta[3] will result in reviews to consider the causes and consequences of these findings in relation to the health of our children.

Brachial Plexus Injury in Alberta

In Alberta there have been sufficient numbers of newborns with shoulder dystocia and complex Brachial Plexus Palsy to result in the organization of plans for an epidemiological study into this question. Although at this time there is no confirmation of an increased morbidity of Brachial Plexus Injury, numerical extrapolations from those with injury seen at Glenrose Rehabilitation Hospital suggest the incidence may be increasing. In 2001, 17 young children with severe brachial plexus injuries were referred to Glenrose.

The incidence of Brachial Plexus Palsy is considered to be 1-2 per 1000 births. Types of nerve injuries may be neuropraxis where full recovery is expected in 75%; axonotmesis with slow recovery; and neurotmesis, root avulsion, and spinal cord injury where there is no recovery. Upper roots and trunks are more likely injured in a vertex presentation where progression is blocked by the symphysis and causes traction injury with shoulder dystocia doubling the delivery forces.[9] This is increased by fundal pressure. Injury during breech presentation is to the lower roots. Injury can occur with Cesarean section delivery. Topographical distribution of injury includes C5-C6, upper trunk giving Erb's Palsy; C5-C7, upper and middle trunk; C5-C8, T1, total plexus; all roots and Horner's Syndrome; and C8-T1 giving Klumpke's Palsy which is rare.[9]

Once a Brachial Plexus Injury is recognized after birth an x-ray of the clavicles and diaphragms should be done as well as x-rays of C-spine if the injury is severe. The arm of the sleeper is pinned to the side of the trunk for 10 days. Range of motion exercises at each diaper change is then started. If there is not full recovery within three

weeks a referral should be made immediately for electrodiagnosis. An electromyography tracing at three weeks is very useful in prognosis and planning subsequent therapy. Alberta now has the capacity to offer Primary Brachial Plexus Surgery as early as 3 months of age as well as Secondary Reconstructive Surgery. For 25% of patients Brachial Plexus Injury is not a benign condition.[10]

References:

1. Wadhera S, Millar WJ, Nimrod C. Trends in Canadian Birth Weights, 1971 to 1989. Canadian Family Physicians 1992; 38:1632-1640.

2. Arbuckle TE, Sherman GJ. An analysis of birth weight by gestational age in Canada. Canadian Medical Association Journal 1989; 140:157-160.

3. Robertson CMT, Svenson LW, Kyle JM. Birth Weight by Gestational Age for Albertan Liveborn Infants, 1985 through 1998. Journal of Obstetrics and Gynecology of Canada 2002; 24(2):138-48.

4. Gerner P, Kramer MS, Chalmers I. Might efforts to increase birthweight in undernourished women to more harm than good? Lancet 1992; 340:1021-1023.

5. McLean FH, Boyd ME, Usher RH, Kramer MS. Past term infants: too big or too small? Am J Obstet Gynecol 1991; 164:619-624.

6. Rodrigues S, Rohenson EJ, Kramer MS, Gray-Donald K. High rates of infant macrosomia: a comparison of a Canadian native and non-native population. J Nutr 2000; 130:806-812.

7. Kramer MS, Barr RG, Luduc DG, Boisjoly C, McVay-White L, Pless IB. Determinants of weight and adiposity in the first year of life. J Pediatr 1985; 106:10-14.

8. Tremblay MS, Willms JD. Secular trends in the body mass index of Canadian children. Can Med Assoc J 2000; 163:1429-33.

9. Navakas AO. Obstetrical brachial plexus injuries. In: Lamb DW, editor. The Paralyzed Hand, Edinburgh: Churchill Livingstone, p 116-35.

10. Stömbeck C, Krumlinde-Sundholm L, Forssberg H, Lindgren A. Functional outcome at 5 years in children with obstetrical brachial plexus palsy with and without microsurgical reconstruction. Dev Med Child Neurol 2000; 42:148-157.

Appendix 5: Resource List

Below are references to reproductive health-related reports and informational Web sites. This list is not intended to be comprehensive.

Alberta Health and Wellness Reports

(available from Health Surveillance, Alberta Health and Wellness).
Maternal Risk Factors in Relationship to Birth Outcome
Alberta Congenital Anomalies Surveillance System, 1980-2000

Reports From Other Provinces

Provincial Health Officer's Annual Report 1995: Women's Health, The Office of the Provincial Health Officer, Ministry of Health Planning, Government of British Columbia. Order at: http://www.healthplanning.gov.bc.ca/cgi-bin/forms/pho/request-reports.cgi

Selected Vital Statistics and Health Status Indicators,One Hundred and Twenty-Ninth Annual Report 2000, Division of Vital Statistics, Ministry of Health Planning, Government of British Columbia: http://www.vs.gov.bc.ca/stats/annual/2000/index.html

The Epidemiology of Infant Mortality in Saskatchewan 1982 – 1996. The Infant Mortality Research Team, Saskatchewan Health. http://www.health.gov.sk.ca/info_center_pub_imrreport.pdf

Manitoba Perinatal Health Surveillance Report 1989-1998. Manitoba Health, Public Health Branch, Epidemiology Unit, Perinatal Project Team. http://www.gov.mb.ca/health/publichealth/epiunit/docs/perinatal.pdf

Accouchements et naissances, Quebec: http://www.msss.gouv.qc.ca/f/statistiques/index.htm

La situation démographique au Québec, bilan 2001 Les naissances : les jumeaux, le poids des nouveau-nés et la mortalité infantile: http://www.stat.gouv.qc.ca/publications/demograp/sit_demo_an.htm

Institut de la statistique du Quebec: http://www.stat.gouv.qc.ca/default_an.htm

Annual Statistical Report, Vital Statistics, Health and Community Services, Government of New Brunswick: http://www.gov.nb.ca/0379/pdf/99vsecrep.pdf

Annual Report 2000-2001, Health and Social Services, Government of Prince Edward Island: http://www.gov.pe.ca/publications/getpublication.php3?number=616

Vital Statistics Annual Report, Government of Nova Scotia: http://www.gov.ns.ca/snsmr/vstat/annualreports/pdf/2000AnnualReport.pdf

Live birth trends, Community and Integrated Health Boards, Newfoundland and Labrador, 1996-2000: http://www.nlchi.nf.ca/pdf/LiveBirth_Rpt.pdf

Northwest Territories Vital Statistics: http://www.stats.gov.nt.ca/Statinfo/Demographics/Vital_Revised/revised_vital.html

International Reports

United States data on 1998 births:
http://www.cdc.gov/nccdphp/drh/pdf/nvs/nvs48_3.pdf
England Maternity Statistics to 2000/01: http://www.doh.gov.uk/public/sb0211.htm

Informational Web Sites

Provincial

Alberta Health and Wellness: http://www.health.gov.ab.ca/
Alberta Medical Association: http://www.albertadoctors.org/home/
Alberta We//net: http://www.albertawellnet.org/
Northern and Central Alberta Perinatal Outreach program: http://www.ncapop.ca/
Regional Health Authorities: http://www.health.gov.ab.ca/rhas/rhamap.htm
British Columbia Ministry of Health Planning: http://www.gov.bc.ca/healthplanning/
British Columbia Reproductive Care Program: http://www.rcp.gov.bc.ca/
Saskatchewan Health: http://www.health.gov.sk.ca/
Manitoba Health: http://www.gov.mb.ca/health/
Ontario Ministry of Health and Long Term Care:
http://www.gov.on.ca/health/index.html
Sante et services sociaux, Quebec: http://www.msss.gouv.qc.ca/
New Brunswick Health and Wellness: http://www.gov.nb.ca/HW-SM/hw/index.htm
Prince Edward Island Health and Social Services: http://www.gov.pe.ca/hss/index.php3
Nova Scotia Department of Health: http://www.gov.ns.ca/health/
Reproductive Care Program of Nova Scotia:
http://admwww1.ucis.dal.ca/transfer/rcp/index.htm
Department of Health and Community Services, Government of Newfoundland and Labrador: http://www.gov.nf.ca/health/Default.htm
Newfoundland and Labrador Centre for Health Information:
http://www.nlchi.nf.ca/index.php

Federal

Health Canada: http://www.hc-sc.gc.ca/
Canadian Institute for Health Information: http://www.cihi.ca/
Statistics Canada:
Canadian Women's Health Network: http://www.cwhn.ca/
Canadian Health Network: http://www.canadian-health-network.ca/
Canadian Medical Association: http://www.cma.ca/cma/common/start.do?lang=2
Canadian Pediatric Society: http://www.cps.ca/

International

World Health Organization: http://www.who.int/home-page/

Appendix 6: Tables

Table A1 Selected Indicators for Pregnancies and Births, Alberta, 1986 - 2000

Indicator	Year														
	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
Live Births	43,304	41,707	41,669	42,979	42,633	42,369	41,673	39,905	39,459	38,528	37,471	36,546	37,527	37,771	36,613
Estimated Pregnancies[1]	54,443	51,984	53,069	54,615	54,443	54,591	55,864	54,166	53,927	52,714	51,721	51,746	52,835	52,902	51,851
Estimated Pregnancy Rate (per 1,000 Women Aged 15-49)	79.9	76.2	77.2	78.6	77.0	76.1	77.0	74.1	73.5	71.4	69.5	68.4	68.3	66.8	64.6
Spontaneous Abortions	4,635	4,559	4,900	4,880	4,955	5,109	5,360	5,089	5,219	5,018	4,774	4,638	4,773	4,708	4,583
Spontaneous Abortion Rate (per 1,000 Women Aged 15-49)	6.8	6.7	7.1	7.0	7.0	7.1	7.4	7.0	7.1	6.8	6.4	6.1	6.2	5.9	5.7
Spontaneous Abortion Rate (per 100 Estimated Pregnancies)	8.5	8.8	9.2	8.9	9.1	9.4	9.6	9.4	9.7	9.5	9.2	9.0	9.0	8.9	8.8
Induced Abortions	6,237	5,465	6,203	6,502	6,559	6,803	8,552	8,905	8,983	8,906	9,240	10,313	10,346	10,164	10,417
Induced Abortion Rate (per 1,000 Women Aged 15-49)	9.2	8.0	9.0	9.4	9.3	9.5	11.8	12.2	12.2	12.1	12.4	13.6	13.4	12.8	13.0
Induced Abortion Rate (per 100 estimated pregnancies)	11.5	10.5	11.7	11.9	12.0	12.5	15.3	16.4	16.7	16.9	17.9	19.9	19.6	19.2	20.1
Total Induction Rate (per 100 Hospital Deliveries)	14.3	12.3	12.0	16.4	17.0	17.0	16.7	21.2	21.8	21.9	22.8	23.6	24.1	25.3	25.9
Cesarean Section Rate (per 100 Hospital Deliveries)	16.3	17.0	17.1	16.3	16.1	16.0	15.9	15.8	15.7	15.8	16.3	16.5	17.3	19.1	20.2
Mean Maternal Age at Delivery	26.7	26.9	27.1	27.2	27.3	27.3	27.5	27.6	27.7	27.8	28.0	28.1	28.1	28.2	28.3
General Fertility Rate (per 1,000 Women Aged 15-49)	63.5	61.2	60.6	61.9	60.3	59.1	57.5	54.6	53.7	52.2	50.3	48.3	48.5	47.7	45.6
Total Fertility Rate (per 1,000 women)	1,830	1,792	1,806	1,875	1,861	1,861	1,843	1,790	1,805	1,793	1,757	1,708	1,728	1,717	1,660
Crude Birth Rate (per 1,000 Population)	17.7	16.9	16.7	17.0	16.5	16.2	15.7	14.9	14.6	14.2	13.7	13.1	13.1	12.9	12.3
Low Birth Weight Rate (per 100 Live Births)	5.5	5.5	5.8	5.9	5.9	5.8	5.8	5.7	5.6	6.0	6.1	6.2	6.2	5.9	6.1
Small for Gestational Age Rate (per 100 Live Singleton Births)	10.9	10.7	10.5	10.6	10.4	10.3	9.7	9.8	9.5	9.9	9.2	9.4	9.0	8.2	7.9
High Birth Weight Rate (per 100 Live Births)	11.1	10.9	10.7	10.9	11.1	11.0	11.4	11.5	11.4	11.3	11.6	11.4	12.3	12.6	12.9
Large for Gestational Age Rate (per 100 Live Singleton Births)	9.6	9.6	9.7	9.5	9.9	9.7	10.7	10.2	10.2	10.3	11.0	10.5	11.4	11.6	12.3
Pre-Term Birth Rate (per 100 Live Births)	6.3	6.4	6.9	6.6	6.9	6.6	6.8	6.6	6.8	7.0	7.4	7.3	7.5	7.8	8.5
Multiple Birth Rate (per 100 Live Births)	1.9	2.1	2.0	2.1	2.0	2.1	2.3	2.2	2.2	2.3	2.4	2.6	2.7	2.7	3.0
Congenital Anomalies Rate (per 1,000 Total Births)	43.7	43.2	47.8	47.0	48.5	43.7	44.0	37.8	37.5	32.9	31.7	32.3	33.1	31.1	34.3
Stillbirths	267	253	297	254	296	310	279	267	266	262	236	249	189	259	238
Stillbirth Rate (per 1,000 Total Births)	6.1	6.0	7.1	5.9	6.9	7.3	6.7	6.6	6.7	6.8	6.3	6.8	5.0	6.8	6.5
Perinatal Mortality rate (per 1,000 Total Births)	10.0	9.5	10.7	9.2	10.8	9.9	10.5	9.9	10.3	10.8	9.6	9.8	7.7	9.9	9.7
Neonatal Mortality Rate (per 1,000 Live Births)	4.9	4.3	4.4	4.2	5.0	3.4	4.7	3.9	4.7	4.9	4.0	3.5	3.4	3.7	4.1
Post-Neonatal Mortality Rate (per 1,000 Live Births)	4.0	3.2	3.8	3.2	2.9	3.3	2.5	2.6	2.7	2.1	2.2	1.4	2.0	2.0	2.4
Infant Mortality Rate (per 1,000 Live Births)	8.9	7.5	8.2	7.4	7.9	6.7	7.2	6.6	7.3	6.9	6.2	4.9	5.4	5.8	6.5

Sources: Vital Statistics, Birth File, Department of Government Services, January 2002 release.
Vital Statistics, Death File, Department of Government Services, May 2001 release.
Vital Statistics, Stillbirth File, Department of Government Services, January 2002 release.
Clinics Files, Alberta Health and Wellness.
Fee-for-Services Claims Files, Alberta Health and Wellness.
Canadian Institute of Health Information Inpatient Files, Alberta Health and Wellness.
Alberta Congenital Anomalies Surveillance System, 1980-99, May 2001 release.
Alberta Health Care Insurance Plan Registration File, Alberta Health and Wellness.

Notes: 1. Estimated pregnancies include livebirths, stillbirths, spontaneous abortions, and induced abortions.
Populations are estimated at June 30, as viewed at December 31 of each year.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A2 Estimated Pregnancy Rates (including Live Births, Stillbirths, Spontaneous Abortions, and Induced Abortions) by Maternal Age Group, Alberta, 1986 - 2000

Year	Total	Maternal Age Group (Years)										
		<15	15-17	18-19	15-19	20-24	25-29	30-34	35-39	40-44	>44	Unknown
Estimated pregnancies[1]												
86	54,443	78	1,834	3,189	5,023	14,856	19,782	11,223	3,034	382	25	40
87	51,984	85	1,690	3,119	4,809	13,231	18,875	11,324	3,138	455	37	30
88	53,069	90	1,695	3,335	5,030	12,917	19,066	11,886	3,464	560	21	35
89	54,615	102	1,736	3,381	5,117	12,791	19,220	12,925	3,843	534	46	37
90	54,443	97	1,753	3,410	5,163	12,629	18,519	13,119	4,233	633	28	22
91	54,591	116	1,928	3,466	5,394	12,618	17,807	13,353	4,574	665	39	25
92	55,864	143	2,180	3,490	5,670	12,857	17,520	13,982	4,864	747	43	38
93	54,166	119	2,224	3,462	5,686	12,535	16,392	13,600	4,986	789	35	24
94	53,927	115	2,043	3,608	5,651	12,179	16,131	13,650	5,250	880	34	37
95	52,714	114	2,022	3,498	5,520	11,919	15,464	13,348	5,376	892	42	39
96	51,721	85	1,948	3,306	5,254	11,434	15,131	13,018	5,682	1,020	54	43
97	51,746	88	1,903	3,368	5,271	11,585	15,078	12,642	5,828	1,170	53	31
98	52,835	90	1,978	3,487	5,465	11,935	15,145	12,949	5,943	1,186	81	41
99	52,902	73	1,894	3,332	5,226	12,072	15,110	12,792	6,221	1,300	74	34
00	51,851	59	1,671	3,392	5,063	11,859	14,746	12,506	6,234	1,305	45	34
Estimated pregnancy rate (per 1,000 women in each age group)[2,3,4]												
86	79.9	0.9	33.3	83.6	53.8	125.8	149.8	96.9	31.7	5.4	0.4	
87	76.2	1.0	31.2	82.6	52.3	118.5	145.1	95.5	32.7	6.0	0.6	
88	77.2	1.0	32.0	86.8	55.0	121.0	148.3	97.9	35.2	7.0	0.3	
89	78.6	1.1	33.3	88.0	56.5	124.8	151.4	104.2	37.5	6.3	0.7	
90	77.0	1.1	33.3	91.0	57.3	124.7	148.2	103.1	39.2	7.1	0.4	
91	76.1	1.2	36.3	94.9	60.2	125.5	147.1	103.3	40.3	7.1	0.6	
92	77.0	1.5	40.1	96.7	62.7	129.9	150.4	107.0	41.2	7.8	0.6	
93	74.1	1.2	40.6	95.7	62.5	128.3	147.4	103.8	40.9	8.0	0.4	
94	73.5	1.1	36.8	98.9	61.4	127.9	152.1	105.5	42.1	8.6	0.4	
95	71.4	1.1	36.0	94.3	59.1	127.2	150.8	106.0	42.4	8.3	0.5	
96	69.5	0.8	33.5	88.4	55.0	123.1	149.4	107.3	44.2	9.1	0.6	
97	68.4	0.8	31.7	88.3	53.7	121.8	148.2	107.6	44.5	9.9	0.6	
98	68.3	0.8	31.7	88.0	53.5	121.3	145.4	113.0	44.7	9.6	0.8	
99	66.8	0.7	29.4	81.3	49.5	118.2	142.9	113.5	46.4	10.2	0.7	
00	64.6	0.5	25.5	79.4	46.8	114.5	139.1	112.7	47.0	9.9	0.4	

Sources: Vital Statistics, Birth File, Department of Government Services, January 2002 release.
Vital Statistics, Stillbirth File, Department of Government Services, January 2002 release.
Clinics Files, Alberta Health and Wellness.
Fee-for-Services Claims Files, Alberta Health and Wellness.
Alberta Health Care Insurance Plan Registration File, Alberta Health and Wellness.

Notes:
1. Estimated pregnancies include live births, stillbirths, spontaneous abortions, and induced abortions.
2. Age-specific rate refers to number of estimated pregnancies per 1,000 women in a specific age group.
3. The age-specific rates for age groups <15 and >44 are calculated based on female populations in 10-14 and 44-49 age groups respectively.
4. Total rate = total estimated pregnancies / number of women aged 15-49 x 1,000.

Populations are estimated at June 30, as viewed at December 31 of each year.
Data include Alberta residents only, with the exception of spontaneous abortion data, which may contain 'out of province' cas
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A3 Estimated Pregnancy Rates (including Live Births, Stillbirths, Spontaneous Abortions, and Induced Abortions) by Residence RHA, Alberta, 1986 - 2000

Residence RHA	Year														
	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
Estimated pregnancies[1,2]															
1	2,971	2,915	2,802	3,002	3,036	2,962	2,988	2,895	2,907	2,910	2,791	2,885	2,632	2,637	2,468
2	1,551	1,421	1,487	1,559	1,502	1,411	1,429	1,406	1,405	1,525	1,471	1,523	1,564	1,544	1,626
3	1,123	1,070	1,097	1,150	1,133	1,130	1,232	1,184	1,234	1,180	1,204	1,253	1,254	1,262	1,247
4	16,088	15,813	16,010	16,736	16,848	16,652	17,150	16,391	16,668	16,209	16,266	16,426	17,099	17,252	17,278
5	875	841	853	822	859	823	838	843	866	844	839	831	839	860	834
6	3,602	3,340	3,378	3,429	3,321	3,413	3,424	3,406	3,235	3,271	3,212	3,156	3,213	3,290	3,208
7	1,628	1,530	1,524	1,527	1,474	1,400	1,396	1,448	1,455	1,366	1,294	1,284	1,329	1,248	1,218
8	1,475	1,376	1,382	1,464	1,452	1,435	1,571	1,445	1,467	1,536	1,482	1,509	1,533	1,531	1,503
9	934	888	868	928	1,02	995	4	1,024	894	940	896	834	812	820	828	817
10	15,896	14,785	15,666	15,866	15,948	16,356	16,535	16,277	15,515	14,803	14,296	14,036	14,346	14,306	13,990
11	1,664	1,577	1,670	1,774	1,646	1,779	1,779	1,739	1,756	1,635	1,549	1,538	1,563	1,674	1,449
12	1,947	1,929	1,860	1,952	1,803	1,847	1,916	1,856	1,849	1,751	1,700	1,742	1,737	1,727	1,598
13	1,744	1,671	1,686	1,612	1,562	1,661	1,630	1,560	1,637	1,672	1,702	1,675	1,728	1,782	1,683
14	563	558	495	530	515	516	520	507	530	514	528	475	502	464	399
15	628	625	583	647	631	648	695	675	743	683	676	639	674	606	632
16	955	854	939	866	942	849	868	838	758	741	801	763	771	817	819
17	516	506	507	528	534	567	575	579	602	653	626	649	620	575	617
Unknown	108	104	84	61	66	49	49	48	130	312	326	202	107	122	110
Alberta	**54,268**	**51,803**	**52,891**	**54,453**	**54,301**	**54,452**	**55,619**	**53,991**	**53,697**	**52,501**	**51,597**	**51,398**	**52,331**	**52,525**	**51,496**
Rate per 1,000 women aged 15-49															
1	86.8	84.7	81.3	87.1	87.0	84.1	84.1	81.2	81.0	80.5	76.8	79.0	71.8	71.0	66.0
2	75.8	69.9	73.1	76.6	73.1	68.2	69.2	67.7	66.3	70.9	67.1	68.5	68.7	66.1	68.7
3	82.2	76.9	76.9	79.0	75.2	72.8	77.1	71.6	72.2	67.0	66.2	66.8	65.0	63.1	60.9
4	77.5	76.0	75.7	77.7	76.4	74.2	75.5	71.8	72.4	69.4	68.4	67.2	67.4	65.9	64.8
5	78.0	75.4	76.4	73.5	75.5	71.2	70.8	69.7	70.6	67.2	65.9	64.8	63.6	63.1	60.7
6	90.0	83.5	84.0	84.4	80.1	81.1	80.0	78.8	74.1	74.2	72.1	69.9	68.8	68.5	65.6
7	68.4	65.2	65.5	66.0	63.8	60.1	59.1	60.9	60.4	56.5	53.0	52.3	53.4	50.1	48.7
8	75.4	70.6	70.2	72.8	70.9	68.0	72.5	66.1	66.0	66.6	63.2	63.3	63.4	61.9	60.6
9	93.2	87.6	84.9	89.3	97.3	87.6	92.4	80.1	84.0	79.5	73.3	70.4	69.6	69.4	67.7
10	76.4	70.7	74.6	75.0	74.1	75.1	75.3	73.4	70.5	68.1	66.1	64.6	65.3	63.9	61.9
11	80.3	76.4	80.0	84.0	76.3	81.1	79.2	76.1	75.5	70.6	66.9	66.5	67.2	70.6	60.9
12	81.9	82.1	78.8	82.6	76.6	78.5	80.9	78.2	78.0	74.1	72.3	73.4	71.9	71.5	66.3
13[3]	-	-	-	-	75.7	79.9	77.9	75.3	78.5	77.7	76.6	73.8	73.7	74.0	69.2
14[3]	-	-	-	-	77.7	78.1	79.5	78.5	81.4	79.1	81.6	74.0	78.3	71.8	62.2
15	113.9	111.8	101.6	112.8	107.8	108.8	115.1	110.0	118.1	105.5	103.2	95.8	100.1	89.0	91.6
16	78.3	74.7	83.1	75.7	81.8	72.7	73.8	72.1	66.5	66.2	71.5	65.1	63.3	66.0	64.2
17	138.4	134.8	132.6	136.0	139.0	143.8	144.3	141.9	144.0	152.1	141.2	137.6	126.2	114.0	122.5
Alberta	**79.6**	**76.0**	**76.9**	**78.4**	**76.8**	**75.9**	**76.7**	**73.9**	**73.1**	**71.1**	**69.3**	**68.0**	**67.6**	**66.3**	**64.2**

Sources: Vital Statistics, Birth File, Department of Government Services, January 2002 release.
Vital Statistics, Stillbirth File, Department of Government Services, January 2002 release.
Clinics Files, Alberta Health and Wellness.
Fee-for-Services Claims Files, Alberta Health and Wellness.
Alberta Health Care Insurance Plan Registration File, Alberta Health and Wellness.

Notes:
1. Estimated pregnancies include live births, stillbirths, spontaneous abortions, and induced abortions.
2. Regional pregnancy estimates differ slightly from non-regional pregnancy estimates (reported in other tables) because regional induced abortion data differ from non-regional induced abortion data (due to differences in source).
3. Population estimations for regions 13 and 14 are not available for years 1986 through 1989.
Populations are estimated at June 30, as viewed at December 31 of each year.
RHA boundaries are current as of April, 2001.
Data include Alberta residents only, with the exception of spontaneous abortion data, which may contain 'out of province' cases.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A4 Estimated Pregnancy Rate (per 1,000 women in each age group) by Residence RHA and Maternal Age Group, Alberta, 1998 - 2000

Residence RHA	Total[1]	Maternal Age Group (Years)									
		<15	15-17	18-19	15-19	20-24	25-29	30-34	35-39	40-44	>44
1998											
1	71.8	0.9	27.0	81.4	48.1	132.8	176.7	115.3	40.6	7.0	1.0
2	68.7	0.6	27.1	77.6	46.7	139.0	165.6	109.8	30.3	8.6	0.4
3	65.0	-	24.3	82.2	46.5	105.3	135.9	115.9	50.1	10.3	0.4
4	67.4	1.2	29.2	87.8	51.8	103.1	130.2	123.3	53.3	12.0	1.1
5	63.6	0.5	23.1	74.8	42.7	136.2	174.1	97.3	29.8	8.8	0.6
6	68.8	0.3	32.0	88.8	54.0	137.5	171.7	104.3	35.1	5.1	0.7
7	53.4	0.7	17.2	63.6	35.3	101.8	133.9	92.1	30.3	4.9	0.6
8	63.4	1.0	32.2	74.2	51.8	127.8	160.6	99.9	35.6	7.7	0.6
9	69.6	0.5	37.1	88.5	55.8	140.8	168.9	100.8	28.8	5.8	0.7
10	65.3	0.6	34.7	81.6	53.2	109.2	135.7	109.5	46.4	9.5	1.1
11	67.2	0.3	33.0	85.9	53.3	139.5	176.5	101.5	32.7	6.2	0.3
12	71.9	1.0	29.9	107.4	60.2	145.3	171.6	102.4	32.9	5.4	0.7
13	73.7	1.1	36.8	108.9	64.7	155.4	160.9	93.6	29.8	7.9	0.4
14	78.3	0.9	41.3	107.5	66.4	149.7	206.1	107.3	26.7	11.0	-
15	100.1	3.2	69.3	122.1	90.5	206.5	161.3	134.9	39.8	3.6	-
16	63.3	1.7	23.0	87.1	48.2	137.3	129.0	95.9	28.9	7.9	-
17	126.2	1.9	59.4	163.0	100.2	246.1	195.9	124.3	69.4	25.9	-
Alberta	**67.6**	**0.8**	**31.4**	**87.1**	**53.0**	**119.1**	**144.3**	**112.4**	**44.4**	**9.4**	**0.9**
1999											
1	71.0	0.3	26.1	78.4	46.8	137.3	173.1	118.7	39.2	6.4	0.6
2	66.1	0.3	27.9	77.6	46.8	134.7	159.9	107.2	31.3	4.5	0.7
3	63.1	0.7	25.6	88.9	51.0	92.8	139.8	114.0	48.6	9.8	-
4	65.9	0.7	28.0	72.5	45.2	100.6	126.9	122.2	56.9	12.9	0.9
5	63.1	1.3	22.4	94.8	50.2	121.3	175.3	95.4	34.9	6.7	-
6	68.5	0.7	26.7	94.9	52.9	142.5	160.5	113.4	34.5	6.4	0.6
7	50.1	0.3	16.0	47.6	28.3	98.2	143.7	88.9	25.0	3.7	0.6
8	61.9	0.5	28.3	85.0	49.9	116.9	157.2	111.9	33.3	7.3	0.6
9	69.4	0.5	44.5	101.3	65.9	156.1	156.8	89.2	31.6	5.1	0.7
10	63.9	0.8	30.2	75.0	47.9	105.4	131.7	111.1	48.5	11.4	0.7
11	70.6	-	28.4	91.5	52.3	146.8	191.8	109.8	36.2	6.3	1.0
12	71.5	0.7	33.6	87.6	53.9	150.2	178.9	102.8	33.2	7.7	0.7
13	74.0	0.3	28.0	92.6	52.9	147.7	176.2	103.5	35.4	6.1	0.7
14	71.8	-	49.6	93.4	66.5	164.1	153.8	78.3	41.7	10.6	1.3
15	89.0	2.3	44.1	160.4	87.1	201.7	155.9	98.7	24.9	10.3	-
16	66.0	-	37.6	98.3	61.5	134.3	151.0	89.4	30.5	6.6	-
17	114.0	0.9	50.8	164.8	93.4	231.1	186.3	113.2	45.0	20.3	2.7
Alberta	**66.3**	**0.7**	**29.2**	**80.4**	**49.1**	**116.7**	**142.0**	**113.1**	**46.2**	**10.2**	**0.7**
2000											
1	66.0	-	23.2	72.0	43.0	116.5	160.8	114.7	43.8	8.1	0.2
2	68.7	0.3	20.6	89.1	48.0	142.1	168.8	110.6	31.0	5.9	0.9
3	60.9	-	15.1	69.7	37.1	101.8	122.8	124.8	49.2	10.7	0.4
4	64.8	0.6	26.1	75.7	45.7	100.9	124.8	121.7	56.6	13.0	0.4
5	60.7	0.4	24.0	76.7	43.3	119.3	155.8	105.0	39.7	5.8	-
6	65.6	0.3	28.4	77.5	47.8	136.4	159.5	105.8	36.3	6.6	0.6
7	48.7	0.5	16.3	45.0	27.5	90.6	145.5	83.5	26.6	7.9	-
8	60.6	0.5	20.2	83.2	44.6	120.0	164.6	105.6	35.9	6.1	-
9	67.7	1.3	29.6	89.0	53.2	150.7	167.3	97.9	28.4	5.9	1.3
10	61.9	0.8	24.8	75.8	45.3	101.2	129.2	112.3	47.8	9.9	0.4
11	60.9	0.5	19.0	77.3	41.1	136.2	162.2	93.7	36.2	6.2	0.3
12	66.3	0.5	26.4	81.4	47.6	137.6	169.6	100.0	37.1	7.5	-
13	69.2	0.3	27.5	89.1	51.4	135.2	167.0	98.5	34.3	5.4	1.0
14	62.2	0.9	30.9	100.5	56.2	146.1	151.2	69.6	27.8	5.9	-
15	91.6	0.7	64.4	134.3	90.9	216.7	158.1	88.1	47.1	6.6	-
16	64.2	-	49.5	93.7	66.8	118.1	146.3	92.3	33.7	5.3	0.6
17	122.5	-	45.9	152.8	87.4	243.6	196.1	121.4	83.9	21.2	5.1
Alberta	**64.2**	**0.6**	**25.5**	**78.1**	**46.3**	**113.0**	**138.5**	**112.3**	**46.8**	**9.9**	**0.4**

Sources: Vital Statistics, Birth File, Department of Government Services, January 2002 release.
Alberta Health Care Insurance Plan Registration File. Alberta Health and Wellness.

Notes:
1. Total rate = total pregnancies / number of women aged 15-49 x 1,000.
2. Regional pregnancy estimates differ slightly from non-regional pregnancy estimates (reported in other tables) because regional induced abortion data differ from non-regional induced abortion data (due to differences in source).

Populations are estimated at June 30, as viewed at December 31 of each year.
RHA boundaries are current as of April, 2001
Data include Alberta residents only, with the exception of spontaneous abortion data, which may contain 'out of province' cases.
Data may differ from previously published data due to differences in definitions and dates of data extraction

Table A5 Spontaneous Abortions, Rate per 1,000 Women and Rate per 100 Estimated Pregnancies, by Maternal Age Group, Alberta, 1986 - 2000

Year	Maternal Age Group (Years)											
	Total	<15	15-17	18-19	15-19	20-24	25-29	30-34	35-39	40-44	>44	Unknown
Spontaneous Abortions												
86	4,635	13	151	252	403	1,172	1,606	920	394	76	11	40
87	4,559	7	148	242	390	1,081	1,527	990	409	104	21	30
88	4,900	22	161	286	447	1,105	1,614	1,093	465	111	8	35
89	4,880	14	201	289	490	1,009	1,566	1,163	479	102	20	37
90	4,955	17	177	283	460	1,071	1,481	1,220	527	145	12	22
91	5,109	21	196	299	495	1,095	1,464	1,284	568	143	14	25
92	5,360	14	203	293	496	1,144	1,501	1,320	636	183	29	37
93	5,089	20	242	342	584	1,023	1,342	1,285	599	203	10	23
94	5,219	18	179	343	522	1,108	1,355	1,257	693	213	17	36
95	5,018	17	194	291	485	1,032	1,371	1,173	668	213	20	39
96	4,774	16	181	267	448	935	1,273	1,140	670	227	23	42
97	4,638	14	156	274	430	912	1,231	1,121	643	228	30	29
98	4,773	8	156	299	455	932	1,266	1,111	682	254	36	29
99	4,708	7	155	257	412	884	1,251	1,118	710	265	29	32
00	4,583	10	133	275	408	895	1,216	1,053	708	244	17	32
Rate per 1,000 Women in Each Age Group[1,2]												
86	6.8	0.1	2.7	6.6	4.3	9.9	12.2	7.9	4.1	1.1	0.2	
87	6.7	0.1	2.7	6.4	4.2	9.7	11.7	8.4	4.3	1.4	0.4	
88	7.1	0.3	3.0	7.4	4.9	10.3	12.6	9.0	4.7	1.4	0.1	
89	7.0	0.2	3.9	7.5	5.4	9.8	12.3	9.4	4.7	1.2	0.3	
90	7.0	0.2	3.4	7.6	5.1	10.6	11.9	9.6	4.9	1.6	0.2	
91	7.1	0.2	3.7	8.2	5.5	10.9	12.1	9.9	5.0	1.5	0.2	
92	7.4	0.1	3.7	8.1	5.5	11.6	12.9	10.1	5.4	1.9	0.4	
93	7.0	0.2	4.4	9.5	6.4	10.5	12.1	9.8	4.9	2.1	0.1	
94	7.1	0.2	3.2	9.4	5.7	11.6	12.8	9.7	5.6	2.1	0.2	
95	6.8	0.2	3.4	7.8	5.2	11.0	13.4	9.3	5.3	2.0	0.2	
96	6.4	0.2	3.1	7.1	4.7	10.1	12.6	9.4	5.2	2.0	0.2	
97	6.1	0.1	2.6	7.2	4.4	9.6	12.1	9.5	4.9	1.9	0.3	
98	6.2	0.1	2.5	7.5	4.5	9.5	12.2	9.7	5.1	2.1	0.4	
99	5.9	0.1	2.4	6.3	3.9	8.7	11.8	9.9	5.3	2.1	0.3	
00	5.7	0.1	2.0	6.4	3.8	8.6	11.5	9.5	5.3	1.9	0.2	
Rate per 100 Estimated Pregnancies in Each Age Group[3,4]												
86	8.5	16.7	8.2	7.9	8.0	7.9	8.1	8.2	13.0	19.9	44.0	
87	8.8	8.2	8.8	7.8	8.1	8.2	8.1	8.7	13.0	22.9	56.8	
88	9.3	24.4	9.5	8.6	8.9	8.6	8.5	9.2	13.4	19.8	38.1	
89	9.0	13.7	11.6	8.5	9.6	7.9	8.1	9.0	12.5	19.1	43.5	
90	9.1	17.5	10.1	8.3	8.9	8.5	8.0	9.3	12.4	22.9	42.9	
91	9.4	18.1	10.2	8.6	9.2	8.7	8.2	9.6	12.4	21.5	35.9	
92	9.6	9.8	9.3	8.4	8.7	8.9	8.6	9.4	13.1	24.5	67.4	
93	9.4	16.8	10.9	9.9	10.3	8.2	8.2	9.4	12.0	25.7	28.6	
94	9.7	15.7	8.8	9.5	9.2	9.1	8.4	9.2	13.2	24.2	50.0	
95	9.5	14.9	9.6	8.3	8.8	8.7	8.9	8.8	12.4	23.9	47.6	
96	9.3	18.8	9.3	8.1	8.5	8.2	8.4	8.8	11.8	22.3	42.6	
97	9.0	15.9	8.2	8.1	8.2	7.9	8.2	8.9	11.0	19.5	56.6	
98	9.1	8.9	7.9	8.6	8.3	7.8	8.4	8.6	11.5	21.4	44.4	
99	8.9	9.6	8.2	7.7	7.9	7.3	8.3	8.7	11.4	20.4	39.2	
00	8.9	16.9	8.0	8.1	8.1	7.5	8.2	8.4	11.4	18.7	37.8	

Sources:
Vital Statistics, Birth File, Department of Government Services, January 2002 release.
Vital Statistics, Stillbirth File, Department of Government Services, January 2002 release.
Clinics Files, Alberta Health and Wellness.
Fee-for-Services Claims Files, Alberta Health and Wellness.
Alberta Health Care Insurance Plan Registration File, Alberta Health and Wellness.

Notes:
1. Total rate = total spontaneous abortions / number of women aged 15-49 x 1,000.
2. The age-specific rates for age groups <15 and >44 are calculated based on female populations in the 10-14 and 44-49 age groups, respectively.
3. Estimated pregnancies include live births, stillbirths, spontaneous abortions, and induced abortions.
4. Total rate = total spontaneous abortions / number of estimated pregnancies for women aged 15-49 x 1,000.

Populations are estimated at June 30, as viewed at December 31 of each year.
Data include Alberta residents only, with the exception of spontaneous abortion data, which may contain 'out of province' cases.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A6 Spontaneous Abortion Rates (per 100 Estimated Pregnancies, and per 1,000 Women aged 15-49) by Residence RHA, Alberta, 1986 - 2000

Residence RHA	Year 86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
Spontaneous Abortions															
1	268	242	254	291	372	370	300	272	298	307	336	311	310	250	222
2	81	94	114	154	112	109	83	99	132	112	125	132	136	143	162
3	91	92	116	109	84	100	109	93	103	111	113	96	116	111	107
4	1,340	1,272	1,477	1,409	1,528	1,640	1,598	1,420	1,574	1,440	1,490	1,423	1,504	1,540	1,405
5	74	64	82	91	92	77	67	85	108	77	73	87	83	83	78
6	268	267	316	298	319	299	280	245	281	325	263	281	260	270	279
7	188	131	157	160	151	145	146	149	129	134	106	110	138	123	127
8	134	140	105	132	119	102	140	132	154	120	104	107	125	127	127
9	87	69	83	70	106	82	87	81	82	81	73	39	78	77	74
10	1,397	1,466	1,451	1,439	1,450	1,482	1,779	1,754	1,536	1,432	1,247	1,203	1,232	1,153	1,216
11	126	123	147	183	138	124	159	143	158	149	90	135	106	159	149
12	153	166	182	191	131	170	167	162	168	142	145	155	152	156	143
13	134	131	138	111	127	163	138	143	163	143	168	177	185	178	180
14	47	47	50	44	31	44	60	57	54	46	59	52	59	51	27
15	55	45	38	34	48	62	81	72	66	69	74	57	79	52	68
16	84	99	103	88	90	77	93	92	58	61	62	53	57	81	70
17	40	48	57	50	36	49	54	61	49	68	59	79	65	54	60
Unknown	68	63	30	26	21	14	19	29	106	201	187	141	88	100	89
Alberta	**4,635**	**4,559**	**4,900**	**4,880**	**4,955**	**5,109**	**5,360**	**5,089**	**5,219**	**5,018**	**4,774**	**4,638**	**4,773**	**4,708**	**4,583**
Rate per 1,000 Women Aged 15-49[1]															
1	7.8	7.0	7.4	8.4	10.7	10.5	8.4	7.6	8.3	8.5	9.2	8.5	8.5	6.7	5.9
2	4.0	4.6	5.6	7.6	5.4	5.3	4.0	4.8	6.2	5.2	5.7	5.9	6.0	6.1	6.8
3	6.7	6.6	8.1	7.5	5.6	6.4	6.8	5.6	6.0	6.3	6.2	5.1	6.0	5.6	5.2
4	6.5	6.1	7.0	6.5	6.9	7.3	7.0	6.2	6.8	6.2	6.3	5.8	5.9	5.9	5.3
5	6.6	5.7	7.3	8.1	8.1	6.7	5.7	7.0	8.8	6.1	5.7	6.8	6.3	6.1	5.7
6	6.7	6.7	7.9	7.3	7.7	7.1	6.5	5.7	6.4	7.4	5.9	6.2	5.6	5.6	5.7
7	7.9	5.6	6.8	6.9	6.5	6.2	6.2	6.3	5.4	5.5	4.3	4.5	5.5	4.9	5.1
8	6.8	7.2	5.3	6.6	5.8	4.8	6.5	6.0	6.9	5.2	4.4	4.5	5.2	5.1	5.1
9	8.7	6.8	8.1	6.7	10.0	7.5	7.9	7.3	7.3	7.2	6.4	3.4	6.6	6.5	6.1
10	6.7	7.0	6.9	6.8	6.7	6.8	8.1	7.9	7.0	6.6	5.8	5.5	5.6	5.2	5.4
11	6.1	6.0	7.0	8.7	6.4	5.7	7.1	6.3	6.8	6.4	3.9	5.8	4.6	6.7	6.3
12	6.4	7.1	7.7	8.1	5.6	7.2	7.1	6.8	7.1	6.0	6.2	6.5	6.3	6.5	5.9
13[2]					6.2	7.8	6.6	6.9	7.8	6.6	7.6	7.8	7.9	7.4	7.4
14[2]					4.7	6.7	9.2	8.8	8.3	7.1	9.1	8.1	9.2	7.9	4.2
15	10.0	8.1	6.6	5.9	8.2	10.4	13.4	11.7	10.5	10.7	11.3	8.5	11.7	7.6	9.9
16	6.9	8.7	9.1	7.7	7.8	6.6	7.9	7.9	5.1	5.5	5.5	4.5	4.7	6.5	5.5
17	10.7	12.8	14.9	12.9	9.4	12.4	13.6	15.0	11.7	15.8	13.3	16.8	13.2	10.7	11.9
Alberta	**6.8**	**6.7**	**7.1**	**7.0**	**7.0**	**7.1**	**7.4**	**7.0**	**7.1**	**6.8**	**6.4**	**6.1**	**6.2**	**5.9**	**5.7**
Rate per 100 Estimated Pregnancies[2,3]															
1	9.0	8.3	9.1	9.7	12.3	12.5	10.0	9.4	10.3	10.5	12.0	10.8	11.8	9.5	9.0
2	5.2	6.6	7.7	9.9	7.5	7.7	5.8	7.0	9.4	7.3	8.5	8.7	8.7	9.3	10.0
3	8.1	8.6	10.6	9.5	7.4	8.8	8.8	7.9	8.3	9.4	9.4	7.7	9.3	8.8	8.6
4	8.3	8.0	9.2	8.4	9.1	9.8	9.3	8.7	9.4	8.9	9.2	8.7	8.8	8.9	8.1
5	8.5	7.6	9.6	11.1	10.7	9.4	8.0	10.1	12.5	9.1	8.7	10.5	9.9	9.7	9.4
6	7.4	8.0	9.4	8.7	9.6	8.8	8.2	7.2	8.7	9.9	8.2	8.9	8.1	8.2	8.7
7	11.5	8.6	10.3	10.5	10.2	10.4	10.5	10.3	8.9	9.8	8.2	8.6	10.4	9.9	10.4
8	9.1	10.2	7.6	9.0	8.2	7.1	8.9	9.1	10.5	7.8	7.0	7.1	8.2	8.3	8.4
9	9.3	7.8	9.6	7.5	10.3	8.6	8.5	9.1	8.7	9.0	8.8	4.8	9.5	9.3	9.1
10	8.8	9.9	9.3	9.1	9.1	9.1	10.8	10.8	9.9	9.7	8.7	8.6	8.6	8.1	8.7
11	7.6	7.8	8.8	10.3	8.4	7.0	8.9	8.2	9.0	9.1	5.8	8.8	6.8	9.5	10.3
12	7.9	8.6	9.8	9.8	7.3	9.2	8.7	8.7	9.1	8.1	8.5	8.9	8.8	9.0	8.9
13	7.7	7.8	8.2	6.9	8.1	9.8	8.5	9.2	10.0	8.6	9.9	10.6	10.7	10.0	10.7
14	8.3	8.4	10.1	8.3	6.0	8.5	11.5	11.2	10.2	8.9	11.2	10.9	11.8	11.0	6.6
15	8.8	7.2	6.5	5.3	7.6	9.6	11.7	10.7	8.9	10.1	10.9	8.9	11.7	8.6	10.8
16	8.8	11.6	11.0	10.2	9.6	9.1	10.7	11.0	7.7	8.2	7.7	6.9	7.4	9.9	8.5
17	7.8	9.5	11.2	9.5	6.7	8.6	9.4	10.5	8.1	10.4	9.4	12.2	10.5	9.4	9.7
Alberta	**8.5**	**8.8**	**9.3**	**9.0**	**9.1**	**9.4**	**9.6**	**9.4**	**9.7**	**9.6**	**9.3**	**9.0**	**9.1**	**9.0**	**8.9**

Sources:
Vital Statistics, Birth File, Department of Government Services, January 2002 release.
Vital Statistics, Stillbirth File, Department of Government Services, January 2002 release.
Clinics Files, Alberta Health and Wellness.
Fee-for-Services Claims Files, Alberta Health and Wellness.
Alberta Health Care Insurance Plan Registration File, Alberta Health and Wellness.

Notes:
1. Population estimations for regions 13 and 14 are not available for years 1986 through 1989.
2. Estimated pregnancies include live births, stillbirths, spontaneous abortions, and induced abortions.
3. Regional pregnancy estimates differ slightly from non-regional pregnancy estimates (reported in other tables) because regional induced abortion data differ from non-regional induced abortion data (due to differences in source).

Populations are estimated at June 30, as viewed at December 31 of each year.
RHA boundaries are current as of April, 2001
Data include Alberta residents only, with the exception of spontaneous abortion data, which may contain 'out of province' cases.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A7 Induced Abortions by Age, and Age-Specific Induced Abortion Rates, Alberta, 1986 - 2000

Year	Total	Maternal Age Group (Years) < 15	15-17	18-19	15-19	20-24	25-29	30-34	35-39	40-44	> 44	Unknown
Number of Induced Abortions												
86	6,237	38	607	857	1,464	2,199	1,321	759	358	93	5	0
87	5,465	44	539	815	1,353	1,788	1,227	663	289	93	8	0
88	6,203	33	563	985	1,548	2,015	1,372	760	362	108	5	0
89	6,502	54	513	965	1,478	2,077	1,498	855	412	117	11	0
90	6,559	44	515	907	1,422	2,131	1,426	952	447	131	6	0
91	6,803	47	578	911	1,489	2,155	1,466	1,003	508	128	7	0
92	8,552	76	816	1097	1,913	2,692	1,849	1,227	645	141	9	0
93	8,905	63	885	1,212	2,097	2,817	1,737	1,290	739	154	8	0
94	8,983	59	832	1,276	2,108	2,813	1,794	1,318	708	179	4	0
95	8,906	69	817	1,203	2,020	2,773	1,795	1,277	758	207	7	0
96	9,240	38	851	1,250	2,101	2,907	1,937	1,220	800	221	15	1
97	10,313	47	911	1,390	2,301	3,272	2,081	1,423	903	275	11	0
98	10,346	57	955	1,442	2,397	3,263	2,109	1,321	898	280	21	0
99	10,164	43	892	1,327	2,219	3,284	2,115	1,336	870	286	11	0
00	10,417	33	795	1,423	2,218	3,452	2,178	1,357	881	284	14	0
Age-Specific Rate (per 1,000 Women in each age group)[1,2]												
	15-49	< 15	15-17	18-19	15-19	20-24	25-29	30-34	35-39	40-44	> 44	
86	9.2	0.4	11.022	.5	15.7	18.610	.0	6.6	3.7	1.3	0.1	
87	8.0	0.5	9.9	21.6	14.7	16.0	9.4	5.6	3.0	1.2	0.1	
88	9.0	0.4	10.625	.6	16.9	18.910	.7	6.3	3.7	1.3	0.1	
89	9.4	0.6	9.8	25.1	16.3	20.311	.8	6.9	4.0	1.4	0.2	
90	9.3	0.5	9.8	24.2	15.8	21.011	.4	7.5	4.1	1.5	0.1	
91	9.5	0.5	10.924	9	16.6	21.412	.1	7.8	4.5	1.4	0.1	
92	11.8	0.8	15.030	.4	21.2	27.215	.9	9.4	5.5	1.5	0.1	
93	12.2	0.6	16.233	.5	23.1	28.815	.6	9.8	6.1	1.6	0.1	
94	12.2	0.6	15.035	0	22.9	29.516	.9	10.2	5.7	1.7	0.0	
95	12.1	0.7	14.532	.4	21.6	29.617	.5	10.1	6.0	1.9	0.1	
96	12.4	0.4	14.633	.4	22.0	31.319	.1	10.1	6.2	2.0	0.2	
97	13.6	0.4	15.236	.4	23.4	34.420	.5	12.1	6.9	2.3	0.1	
98	13.4	0.5	15.336	.4	23.5	33.220	.3	11.5	6.8	2.3	0.2	
99	12.8	0.4	13.832	.4	21.0	32.220	0	11.9	6.5	2.2	0.1	
00	13.0	0.3	12.133	.3	20.5	33.320	.6	12.2	6.6	2.2	0.1	
Age-Specific Rate (per 100 estimated pregnancies in each age group)[1,2]												
	15-49	< 15	15-17	18-19	15-19	20-24	25-29	30-34	35-39	40-44	> 44	
86	11.5	48.7	33.126	.9	29.1	14.8	6.7	6.8	11.824	.3	20.0	
87	10.5	51.8	31.826	.1	28.1	13.5	6.5	5.9	9.2	20.4	21.6	
88	11.7	36.7	33.229	.5	30.8	15.6	7.2	6.4	10.519	.3	23.8	
89	11.9	52.9	29.628	.5	28.9	16.2	7.8	6.6	10.721	.9	23.9	
90	12.1	45.4	29.426	.6	27.5	16.9	7.7	7.3	10.620	.7	21.4	
91	12.5	40.5	30.026	.3	27.6	17.1	8.2	7.5	11.119	.2	17.9	
92	15.4	53.1	37.431	.4	33.7	20.910	.6	8.8	13.318	.9	20.9	
93	16.5	52.9	39.835	.0	36.9	22.510	.6	9.5	14.819	.5	22.9	
94	16.7	51.3	40.735	.4	37.3	23.111	.1	9.7	13.520	.3	11.8	
95	16.9	60.5	40.434	.4	36.6	23.311	.6	9.6	14.123	.2	16.7	
96	17.9	44.7	43.737	.8	40.0	25.412	.8	9.4	14.121	.7	27.8	
97	20.0	53.4	47.941	.3	43.7	28.213	.8	11.3	15.523	.5	20.8	
98	19.6	63.3	48.341	.4	43.9	27.313	.9	10.2	15.123	.6	25.9	
99	19.3	58.9	47.139	.8	42.5	27.214	.0	10.4	14.022	.0	14.9	
00	20.1	55.9	47.642	.0	43.8	29.114	.8	10.9	14.121	.8	31.1	

Sources: Clinics Files, Alberta Health and Wellness.

Alberta Health Care Insurance Plan Registration File, Alberta Health and Wellness.

Notes:

1. Age-specific rate refers to number of induced abortions per 1,000 women in a specific age group.
2. The age-specific rates for age groups <15 and >44 are calculated based on female populations in 10-14 and 45-49 age groups respectively.

Populations are estimated at June 30, as viewed at December 31 of each year.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A8 Induced Abortions by Facility Type, Alberta, 1986 - 2000

Year	Total	Acute Care Hospital		Private Clinic	
		Cases	%	Cases	%
86	**6,237**	6,237	100.0	0	0.0
87	**5,465**	5,465	100.0	0	0.0
88	**6,203**	6,203	100.0	0	0.0
89	**6,502**	6,502	100.0	0	0.0
90	**6,559**	6,559	100.0	0	0.0
91	**6,803**	6,292	92.5	511	7.5
92	**8,552**	6,131	71.7	2,421	28.3
93	**8,905**	6,368	71.5	2,537	28.5
94	**8,983**	6,696	74.5	2,287	25.5
95	**8,906**	6,607	74.2	2,299	25.8
96	**9,240**	5,955	64.4	3,285	35.6
97	**10,313**	6,353	61.6	3,960	38.4
98	**10,346**	6,053	58.5	4,293	41.5
99	**10,164**	5,904	58.1	4,260	41.9
00	**10,417**	5,895	56.6	4,522	43.4

Source: Clinics Files, Alberta Health and Wellness.

Notes: The clinics opened in the Fall of 1991.
Data include Alberta residents only.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A9 Induced Abortions by Facility Regions, Alberta, 1986 - 2000

Year	Total	Calgary (Hospitals and Clinics)		Edmonton (Hospitals and Clinics)		Rural Areas (Hospitals)	
		Cases	%	Cases	%	Cases	%
86	**6,237**	3,166	50.8	2,040	32.7	1,031	16.5
87	**5,465**	3,072	56.2	1,288	23.6	1,105	20.2
88	**6,203**	3,199	51.6	1,919	30.9	1,085	17.5
89	**6,502**	3,132	48.2	2,385	36.7	985	15.1
90	**6,559**	3,490	53.2	2,387	36.4	682	10.4
91	**6,803**	3,234	47.5	2,831	41.6	738	10.8
92	**8,552**	4,549	53.2	3,527	41.2	476	5.6
93	**8,905**	4,722	53.0	3,659	41.1	524	5.9
94	**8,983**	4,840	53.9	3,595	40.0	548	6.1
95	**8,906**	4,755	53.4	3,624	40.7	527	5.9
96	**9,240**	4,917	53.2	3,855	41.7	468	5.1
97	**10,313**	5,398	52.3	4,462	43.3	453	4.4
98	**10,346**	5,668	54.8	4,297	41.5	381	3.7
99	**10,164**	5,483	53.9	4,326	42.6	355	3.5
00	**10,417**	5,636	54.1	4,477	43.0	304	2.9

Source: Clinics Files, Alberta Health and Wellness.

Notes: The clinics opened in the Fall of 1991.
Data include Alberta residents only.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A10 Induced Abortions by Week of Gestation and Maternal Age Group, Alberta, 1998 - 2000

Age Group (Years)	Total	Week of Gestation											
		< 9		9 -12		13 -16		17-20		>20		Unknown	
		Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
1998													
<15	57	16	28.1	31	54.4	6	10.5	4	7.0	0	0.0	0	0.0
15-17	955	315	33.0	485	50.8	98	10.3	55	5.8	2	0.2	0	0.0
18-19	1,442	493	34.2	724	50.2	159	11.0	63	4.4	3	0.2	0	0.0
15-19	2,397	808	33.7	1,209	50.4	257	10.7	118	4.9	5	0.2	0	0.0
20-24	3,263	1407	43.1	1,491	45.7	259	7.9	101	3.1	3	0.1	2	0.1
25-29	2,109	995	47.2	892	42.3	143	6.8	74	3.5	5	0.2	0	0.0
30-34	1,321	702	53.1	511	38.7	73	5.5	29	2.2	4	0.3	2	0.2
35-39	898	489	54.5	329	36.6	39	4.3	34	3.8	5	0.6	2	0.2
40-44	280	156	55.7	101	36.1	9	3.2	12	4.3	2	0.7	0	0.0
>44	21	12	57.1	6	28.6	0	0.0	3	14.3	0	0.0	0	0.0
Total	10,346	4,585	44.3	4,570	44.2	786	7.6	375	3.6	24	0.2	6	0.1
1999													
<15	43	17	39.5	17	39.5	6	14.0	3	7.0	0	0.0		
15-17	892	269	30.2	468	52.5	103	11.5	50	5.6	2	0.2		
18-19	1,327	420	31.7	665	50.1	170	12.8	71	5.4	1	0.1		
15-19	2,219	689	31.1	1,133	51.1	273	12.3	121	5.5	3	0.1		
20-24	3,284	1293	39.4	1,577	48.0	299	9.1	111	3.4	4	0.1		
25-29	2,115	929	43.9	948	44.8	159	7.5	72	3.4	7	0.3		
30-34	1,336	646	48.4	528	39.5	108	8.1	46	3.4	8	0.6		
35-39	870	429	49.3	353	40.6	51	5.9	35	4.0	2	0.2		
40-44	286	129	45.1	129	45.1	14	4.9	13	4.5	1	0.3		
>44	11	5	45.5	5	45.5	0	0.0	1	9.1	0	0.0		
Total	10,164	4,137	40.7	4,690	46.1	910	9.0	402	4.0	25	0.2		
2000													
<15	33	13	39.4	14	42.4	4	12.1	2	6.1	0	0.0		
15-17	795	238	29.9	419	52.7	87	10.9	49	6.2	2	0.3		
18-19	1,423	510	35.8	688	48.3	135	9.5	87	6.1	3	0.2		
15-19	2,218	748	33.7	1,107	49.9	222	10.0	136	6.1	5	0.2		
20-24	3,452	1,416	41.0	1,618	46.9	270	7.8	145	4.2	3	0.1		
25-29	2,178	1,029	47.2	920	42.2	158	7.3	68	3.1	3	0.1		
30-34	1,357	701	51.7	533	39.3	83	6.1	40	2.9	0	0.0		
35-39	881	460	52.2	349	39.6	43	4.9	28	3.2	1	0.1		
40-44	284	145	51.1	108	38.0	19	6.7	12	4.2	0	0.0		
>44	14	6	42.9	7	50.0	1	7.1	0	0.0	0	0.0		
Total	10,417	4,518	43.4	4,656	44.7	800	7.7	431	4.1	12	0.1		

Source: Clinics Files, Alberta Health and Wellness.

Note: Data include Alberta residents only.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A11 Induced Abortions by Week of Gestation and Facility Type, Alberta, 1986 - 2000

Year	Total	Week of Gestation											
		<9		9-12		13-16		17-20		>20		Unknown	
		Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
All Facilities													
86	6,237	1,576	25.3	4,047	64.9	451	7.2	159	2.5	4	0.1	0	0.0
87	5,465	1,521	27.8	3,408	62.4	341	6.2	186	3.4	9	0.2	0	0.0
88	6,203	1,692	27.3	3,838	61.9	477	7.7	188	3.0	8	0.1	0	0.0
89	6,502	1,785	27.5	4,388	67.5	265	4.1	54	0.8	9	0.1	1	0.0
90	6,559	2,055	31.3	4,256	64.9	200	3.0	44	0.7	4	0.1	0	0.0
91	6,803	1,324	19.5	5,089	74.8	338	5.0	49	0.7	3	0.0	0	0.0
92	8,552	2,585	30.2	5,179	60.6	637	7.4	144	1.7	7	0.1	0	0.0
93	8,905	2,460	27.6	5,606	63.0	651	7.3	180	2.0	8	0.1	0	0.0
94	8,983	2,643	29.4	5,584	62.2	549	6.1	198	2.2	9	0.1	0	0.0
95	8,906	2,500	28.1	5,691	63.9	502	5.6	195	2.2	18	0.2	0	0.0
96	9,240	3,510	38.0	5,016	54.3	490	5.3	217	2.3	7	0.1	0	0.0
97	10,313	5,073	49.2	4,356	42.2	626	6.1	253	2.5	5	0.0	0	0.0
98	10,346	4,585	44.3	4,570	44.2	786	7.6	375	3.6	24	0.2	6	0.1
99	10,164	4,137	40.7	4,690	46.1	910	9.0	402	4.0	25	0.2	0	0.0
00	10,417	4,518	43.4	4,656	44.7	800	7.7	431	4.1	12	0.1	0	0.0
Acute Care Hospitals													
86	6,237	1,576	25.3	4,047	64.9	451	7.2	159	2.5	4	0.1	0	0.0
87	5,465	1,521	27.8	3,408	62.4	341	6.2	186	3.4	9	0.2	0	0.0
88	6,203	1,692	27.3	3,838	61.9	477	7.7	188	3.0	8	0.1	0	0.0
89	6,502	1,785	27.5	4,388	67.5	265	4.1	54	0.8	9	0.1	1	0.0
90	6,559	2,055	31.3	4,256	64.9	200	3.0	44	0.7	4	0.1	0	0.0
91	6,292	1,284	20.4	4,747	75.4	219	3.5	39	0.6	3	0.0	0	0.0
92	6,131	2,098	34.2	3,869	63.1	117	1.9	43	0.7	4	0.1	0	0.0
93	6,368	1,889	29.7	4,295	67.4	140	2.2	38	0.6	6	0.1	0	0.0
94	6,696	2,030	30.3	4,485	67.0	132	2.0	44	0.7	5	0.1	0	0.0
95	6,607	1,550	23.5	4,853	73.5	139	2.1	53	0.8	12	0.2	0	0.0
96	5,955	1,938	32.5	3,790	63.6	151	2.5	74	1.2	2	0.0	0	0.0
97	6,353	2,907	45.8	2,983	47.0	352	5.5	108	1.7	3	0.0	0	0.0
98	6,053	2,338	38.6	3,115	51.5	380	6.3	203	3.4	17	0.3	0	0.0
99	5,904	2,053	34.8	3,212	54.4	421	7.1	197	3.3	21	0.4	0	0.0
00	5,895	2,424	41.1	2,933	49.8	342	5.8	191	3.2	5	0.1	0	0.0
Private Clinics													
91	511	40	7.8	342	66.9	119	23.3	10	2.0	0	0.0	0	0.0
92	2,421	487	20.1	1,310	54.1	520	21.5	101	4.2	3	0.1	0	0.0
93	2,537	571	22.5	1,311	51.7	511	20.1	142	5.6	2	0.1	0	0.0
94	2,287	613	26.8	1,099	48.1	417	18.2	154	6.7	4	0.2	0	0.0
95	2,299	950	41.3	838	36.5	363	15.8	142	6.2	6	0.3	0	0.0
96	3,285	1,572	47.9	1,226	37.3	339	10.3	143	4.4	5	0.2	0	0.0
97	3,960	2,166	54.7	1,373	34.7	274	6.9	145	3.7	2	0.1	0	0.0
98	4,293	2,247	52.3	1,455	33.9	406	9.5	172	4.0	7	0.2	6	0.1
99	4,260	2,084	48.9	1,478	34.7	489	11.5	205	4.8	4	0.1	0	0.0
00	4,522	2,094	46.3	1,723	38.1	458	10.1	240	5.3	7	0.2	0	0.0

Source: Clinics Files, Alberta Health and Wellness.

Notes: The clinics opened in the Fall of 1991.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A12 Induced Abortions and Induced Abortion Rate by Residence RHA, Alberta, 1986 - 2000

RHA	Year														
	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
Induced Abortions															
1	246	234	217	237	209	216	264	260	270	291	289	321	259	290	276
2	141	134	138	129	102	99	138	154	132	132	177	198	182	162	238
3	149	137	153	161	165	154	220	231	233	229	234	246	240	278	227
4	2,609	2,504	2,486	2,613	2,754	2,665	3,323	3,448	3,495	3,434	3,556	3,876	3,955	3,942	4,052
5	78	68	85	62	72	69	87	114	113	96	116	118	127	127	126
6	321	301	345	323	245	278	393	374	401	393	414	428	448	453	498
7	93	65	79	83	72	88	114	143	153	168	147	173	176	137	153
8	95	72	115	118	144	158	189	190	180	183	220	240	265	240	233
9	55	41	40	68	65	62	71	77	97	86	104	116	116	102	116
10	1,663	1,181	1,742	1,972	1,990	2,224	2,749	2,925	2,847	2,784	2,854	3,254	3,144	3,097	3,183
11	89	57	103	100	88	122	163	183	161	161	165	197	203	213	193
12	92	87	103	103	92	125	156	158	179	172	160	200	195	211	208
13	193	181	185	147	172	174	194	191	202	204	227	242	248	211	237
14	38	32	29	42	33	39	39	58	47	56	63	55	46	48	47
15	50	63	56	58	67	41	60	55	79	67	70	75	66	77	76
16	93	70	84	73	83	97	102	108	119	102	137	137	122	153	147
17	17	16	11	16	19	18	15	42	21	24	44	28	34	31	35
Unknown	40	41	54	35	45	35	30	19	24	111	139	61	16	15	17
Alberta	**6,062**	**5,284**	**6,025**	**6,340**	**6,417**	**6,664**	**8,307**	**8,730**	**8,753**	**8,693**	**9,116**	**9,965**	**9,842**	**9,787**	**10,062**
Induced Abortion Rate (per 1,000 Women Aged 15-49)															
1	7.2	6.8	6.3	6.9	6.0	6.1	7.4	7.3	7.5	8.0	8.0	8.8	7.1	7.8	7.4
2	6.9	6.6	6.8	6.3	5.0	4.8	6.7	7.4	6.2	6.1	8.1	8.9	8.0	6.9	10.1
3	10.9	9.8	10.7	11.1	11.0	9.9	13.8	14.0	13.6	13.0	12.9	13.1	12.4	13.9	11.1
4	12.6	12.0	11.7	12.1	12.5	11.9	14.6	15.1	15.2	14.7	15.0	15.9	15.6	15.1	15.2
5	7.0	6.1	7.6	5.5	6.3	6.0	7.4	9.4	9.2	7.6	9.1	9.2	9.6	9.3	9.2
6	8.0	7.5	8.6	7.9	5.9	6.6	9.2	8.6	9.2	8.9	9.3	9.5	9.6	9.4	10.2
7	3.9	2.8	3.4	3.6	3.1	3.8	4.8	6.0	6.3	6.9	6.0	7.0	7.1	5.5	6.1
8	4.9	3.7	5.8	5.9	7.0	7.5	8.7	8.7	8.1	7.9	9.4	10.1	11.0	9.7	9.4
9	5.5	4.0	3.9	6.5	6.1	5.7	6.4	6.9	8.7	7.6	9.1	10.1	9.9	8.5	9.6
10	8.0	5.6	8.3	9.3	9.2	10.2	12.5	13.2	12.9	12.8	13.2	15.0	14.3	13.8	14.1
11	4.3	2.8	4.9	4.7	4.1	5.6	7.3	8.0	6.9	7.0	7.1	8.5	8.7	9.0	8.1
12	3.9	3.7	4.4	4.4	3.9	5.3	6.6	6.7	7.6	7.3	6.8	8.4	8.1	8.7	8.6
13	9.5	8.9	9.1	7.2	8.3	8.4	9.3	9.2	9.7	9.5	10.2	10.7	10.6	8.8	9.7
14	5.8	4.9	4.5	6.5	5.0	5.9	6.0	9.0	7.2	8.6	9.7	8.6	7.2	7.4	7.3
15	9.1	11.3	9.8	10.1	11.5	6.9	9.9	9.0	12.6	10.3	10.7	11.2	9.8	11.3	11.0
16	7.6	6.1	7.4	6.4	7.2	8.3	8.7	9.3	10.4	9.1	12.2	11.7	10.0	12.4	11.5
17	4.6	4.3	2.9	4.1	4.9	4.6	3.8	10.3	5.0	5.6	9.9	5.9	6.9	6.1	6.9
Alberta	**8.9**	**7.7**	**8.8**	**9.1**	**9.1**	**9.3**	**11.5**	**11.9**	**11.9**	**11.8**	**12.2**	**13.2**	**12.7**	**12.4**	**12.5**

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.
Fee-for-Service Claims Files, Alberta Health and Wellness.

Note: RHA boundaries are current as of April, 2001.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A13 Induction Rates, Alberta, 1986 - 2000

Year	Total hospital deliveries[1]	Total Induction		Medical Induction[2]		Surgical Induction[3]		Combined Induction[4]	
		Cases	Rate[5]	Cases	Rate[5]	Cases	Rate[5]	Cases	Rate[5]
86	43,675	6,258	14.3	4,149	9.5	1,387	3.2	722	1.7
87	41,910	5,165	12.3	3,645	8.7	1,051	2.5	469	1.1
88	41,983	5,040	12.0	3,450	8.2	1,057	2.5	533	1.3
89	43,272	7,085	16.4	4,259	9.8	1,462	3.4	1,364	3.2
90	43,024	7,306	17.0	4,487	10.4	1,314	3.1	1,505	3.5
91	42,676	7,269	17.0	4,556	10.7	1,354	3.2	1,359	3.2
92	41,727	6,964	16.7	4,232	10.1	1,275	3.1	1,457	3.5
93	40,043	8,484	21.2	4,356	10.9	2,390	6.0	1,738	4.3
94	39,554	8,642	21.8	4,698	11.9	2,256	5.7	1,688	4.3
95	38,462	8,414	21.9	5,179	13.5	1,596	4.1	1,639	4.3
96	37,312	8,495	22.8	5,757	15.4	1,095	2.9	1,643	4.4
97	36,387	8,578	23.6	6,428	17.7	647	1.8	1,503	4.1
98	37,432	9,004	24.1	6,932	18.5	559	1.5	1,513	4.0
99	37,898	9,599	25.3	7,320	19.3	605	1.6	1,674	4.4
00	36,711	9,505	25.9	7,324	20.0	547	1.5	1,634	4.5

Source: Canadian Institute of Health Information Inpatient Files, Alberta Health and Wellness.

ICD-9 code All ICD-9 codes are based on the first three diagnostic codes and the first three procedure codes in the Hospital Morbidity Files.

1. Hospital delivery: Diagnostic codes 640-648 if 5th digit=1 or 2 or 650 or 651-676 if 5th digit=1 or 2 or V27 or procedure codes 72.0 to 74.99
2. Medical induction: Procedure codes 73.4 without 73.01 or 73.1
3. Surgical induction: procedure codes 73.01 and/or 73.1 without 73.4
4. Combined induction: procedure codes: 73.4 with 73.01 and/or 73.1
5. Rate = Cases / Total hospital deliveries * 100

Data include 'out of province' cases.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A14 Induction Rates by Residence RHA, Alberta, 1998 - 2000

Residence RHA[6]	Total hospital deliveries[1]	Total Induction		Medical Induction[2]		Surgical Induction[3]		Combined Induction[4]	
		Cases	Rate[5]	Cases	Rate[5]	Cases	Rate[5]	Cases	Rate[5]
1998									
1	2,001	463	23.1	428	21.4	20	1.0	15	0.7
2	1,217	115	9.4	104	8.5	5	0.4	6	0.5
3	869	169	19.4	120	13.8	17	2.0	32	3.7
4	11,309	2,552	22.6	1,798	15.9	187	1.7	567	5.0
5	638	131	20.5	113	17.7	4	0.6	14	2.2
6	2,199	602	27.4	413	18.8	32	1.5	157	7.1
7	1,168	297	25.4	258	22.1	17	1.5	22	1.9
8	1,112	284	25.5	223	20.1	20	1.8	41	3.7
9	735	179	24.4	149	20.3	6	0.8	24	3.3
10	9,699	2,590	26.7	1,997	20.6	127	1.3	466	4.8
11	1,201	306	25.5	254	21.1	11	0.9	41	3.4
12	1,365	332	24.3	275	20.1	30	2.2	27	2.0
13	1,254	332	26.5	295	23.5	33	2.6	4	0.3
14	397	70	17.6	65	16.4	4	1.0	1	0.3
15	508	141	27.8	108	21.3	13	2.6	20	3.9
16	583	192	32.9	144	24.7	7	1.2	41	7.0
17	490	103	21.0	82	16.7	13	2.7	8	1.6
Unknown	687	146	21.3	106	15.4	13	1.9	27	3.9
Alberta	37,432	9,004	24.1	6,932	18.5	559	1.5	1,513	4.0
1999									
1	2,043	497	24.3	468	22.9	20	1.0	9	0.4
2	1,201	154	12.8	140	11.7	7	0.6	7	0.6
3	853	151	17.7	97	11.4	21	2.5	33	3.9
4	11,403	2,958	25.9	1,992	17.5	256	2.2	710	6.2
5	673	149	22.1	128	19.0	6	0.9	15	2.2
6	2,345	627	26.7	436	18.6	32	1.4	159	6.8
7	1,147	286	24.9	244	21.3	15	1.3	27	2.4
8	1,147	273	23.8	205	17.9	15	1.3	53	4.6
9	730	187	25.6	167	22.9	4	0.5	16	2.2
10	9,817	2,742	27.9	2,114	21.5	126	1.3	502	5.1
11	1,247	339	27.2	268	21.5	23	1.8	48	3.8
12	1,332	353	26.5	290	21.8	29	2.2	34	2.6
13	1,346	296	22.0	285	21.2	6	0.4	5	0.4
14	360	52	14.4	46	12.8	3	0.8	3	0.8
15	457	109	23.9	96	21.0	7	1.5	6	1.3
16	566	184	32.5	158	27.9	7	1.2	19	3.4
17	472	56	11.9	44	9.3	10	2.1	2	0.4
Unknown	759	186	24.5	142	18.7	18	2.4	26	3.4
Alberta	37,898	9,599	25.3	7,320	19.3	605	1.6	1,674	4.4
2000									
1	1,896	418	22.0	385	20.3	24	1.3	9	0.5
2	1,193	192	16.1	176	14.8	5	0.4	11	0.9
3	890	165	18.5	112	12.6	17	1.9	36	4.0
4	11,361	3,047	26.8	2,179	19.2	221	1.9	647	5.7
5	647	158	24.4	120	18.5	9	1.4	29	4.5
6	2,219	538	24.2	362	16.3	47	2.1	129	5.8
7	1,113	296	26.6	259	23.3	13	1.2	24	2.2
8	1,107	324	29.3	248	22.4	14	1.3	62	5.6
9	734	184	25.1	161	21.9	6	0.8	17	2.3
10	9,376	2,633	28.1	1,976	21.1	123	1.3	534	5.7
11	1,064	300	28.2	244	22.9	12	1.1	44	4.1
12	1,207	283	23.4	229	19.0	23	1.9	31	2.6
13	1,240	346	27.9	343	27.7	2	0.2	1	0.1
14	325	54	16.6	53	16.3	0	0.0	1	0.3
15	471	108	22.9	90	19.1	8	1.7	10	2.1
16	585	193	33.0	168	28.7	6	1.0	19	3.2
17	506	82	16.2	72	14.2	5	1.0	5	1.0
Unknown	777	184	23.7	147	18.9	12	1.5	25	3.2
Alberta	36,711	9,505	25.9	7,324	20.0	547	1.5	1,634	4.5

Source: Canadian Institute of Health Information Inpatient Files, Alberta Health and Wellness.

ICD-9 codes: All ICD-9 codes are based on the first three diagnostic codes and the first three procedure codes in the Hospital Morbidity Files.

1. Hospital delivery: Diagnostic codes 640-648 if 5th digit=1 or 2 or 650 or 651-676 if 5th digit=1 or 2 or V27 or procedure codes 72.0 to 74.99
2. Medical induction: Procedure codes 73.4 without 73.01 or 73.1
3. Surgical induction: procedure codes 73.01 and/or 73.1 without 73.4
4. Combined induction: procedure codes: 73.4 with 73.01 and/or 73.1
5. Rate = Cases / Total hospital deliveries x 100
6. RHA boundaries are current as of April, 2001.

Notes:

Data include 'out of province' cases.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A15 Epidural Rate by Facility RHA, Alberta, 1998 - 2000

Facility RHA	1998			1999			2000		
	Total Pregnancies	Epidural Analgesia in Labour	Epidural Rate[1]	Total Pregnancies	Epidural Analgesia in Labour	Epidural Rate[1]	Total Pregnancies	Epidural Analgesia in Labour	Epidural Rate[1]
1	2,079	211	10.1	2,104	403	19.2	1,975	448	22.7
2	1,242	16	1.3	1,234	28	2.3	1,194	51	4.3
3	562	76	13.5	530	103	19.4	590	64	10.8
4	12,078	5,241	43.4	12,299	5,610	45.6	12,305	6,167	50.1
5	366	36	9.8	360	43	11.9	340	0	0.0
6	2,300	118	5.1	2,406	84	3.5	2,262	123	5.4
7	837	71	8.5	821	121	14.7	756	137	18.1
8	433	158	36.5	437	51	11.7	394	42	10.7
9	575	23	4.0	605	24	4.0	535	11	2.1
10	12,028	3,979	33.1	12,183	4,924	40.4	11,637	5,223	44.9
11	535	42	7.9	554	36	6.5	500	30	6.0
12	1,124	58	5.2	1,085	42	3.9	949	31	3.3
13	1,226	7	0.6	1,285	2	0.2	1,220	48	3.9
14	401	9	2.2	358	19	5.3	325	15	4.6
15	393	13	3.3	360	21	5.8	354	34	9.6
16	639	187	29.3	619	260	42.0	626	192	30.7
17	411	0	0.0	418	0	0.0	430	0	0.0
Alberta	**37,229**	**10,245**	**27.5**	**37,658**	**11,771**	**31.3**	**36,392**	**12,616**	**34.7**

Source: Statistics reported to the Reproductive Care Committee from Canadian Institute of Health Information Inpatient Files, Alberta Health and Wellness; validated with hospitals and Perinatal Outreach Programs.

Notes: 1. Rate is per 100 pregnancies.

RHA boundaries are current as of 2001.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A16 Epidural Rate by Level of Facility, Alberta, 1998 - 2000

Hospitals	1998			1999			2000		
	Total Pregnancies	Epidural Analgesia in Labour	Epidural Rate	Total Pregnancies	Epidural Analgesia in Labour	Epidural Rate	Total Pregnancies	Epidural Analgesia in Labour	Epidural Rate
Level III									
Foothills	4,253	2,254	53.0	4,344	2,378	54.7	4,157	2,330	56.1
Royal Alexandra/University of Alberta Hosp	4,498	1,564	34.8	4,408	1,580	35.8	4,017	1,730	43.1
Level III Total	**8,751**	**3,818**	**43.6**	**8,752**	**3,958**	**45.2**	**8,174**	**4,060**	**49.7**
Level II									
Rockyview General Hospital	4,011	1,678	41.8	4,185	1,948	46.5	4,115	2,190	53.2
Misericordia Hospital	2,549	739	29.0	2,620	750	28.6	2,657	787	29.6
Grey Nuns Hospital	3,479	1,676	48.2	3,553	2,037	57.3	3,560	2,218	62.3
Grande Prairie	1,061	7	0.7	1,104	2	0.2	1,055	48	4.5
Lethbridge Regional Hospital	1,589	184	11.6	1,601	365	22.8	1,572	431	27.4
Medicine Hat Regional Hospital	936	16	1.7	897	28	3.1	899	51	5.7
Red Deer General Hospital	1,702	102	6.0	1,750	67	3.8	1,699	113	6.7
Peter Lougheed Centre	3,814	1,309	34.3	3,770	1,284	34.1	4,033	1,647	40.8
Level II Total	**19,141**	**5,711**	**29.8**	**19,480**	**6,481**	**33.3**	**19,590**	**7,485**	**38.2**
Level I									
North	7,404	573	7.7	7,453	1,145	15.4	6,817	987	14.5
South	1,933	143	7.4	1,973	187	9.5	1,811	84	4.6
Level I Total	**9,337**	**716**	**7.7**	**9,426**	**1,332**	**14.1**	**8,628**	**1,071**	**12.4**
Alberta	**37,229**	**10,245**	**27.5**	**37,658**	**11,771**	**31.3**	**36,392**	**12,616**	**34.7**

Source: Statistics reported to the Reproductive Care Committee from Canadian Institute of Health Information Inpatient Files, Alberta Health and Wellness; validated with hospitals and Perinatal Audit Programs

Note: 1. Number of women with epidural analgesia in labour / Total pregnancies x 100.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A17 Operative and Vaginal Breech Deliveries, Alberta, 1986 - 2000

Year	Total Hospital Deliveries[1]	Cesarean Section[2]		Forceps[3]		Vacuum Extraction[4]		Forceps and/or Vacuum		Vaginal Breech Delivery[5]	
		Cases	Rate[6]	Cases	Rate[6]	Cases	Rate[6]	Cases	Rate[6]	Cases	Rate[6]
86	43,675	7,130	16.3	6,068	13.9	324	0.7	6,392	14.6	389	0.9
87	41,910	7,142	17.0	5,229	12.5	653	1.6	5,882	14.0	343	0.8
88	41,983	7,190	17.1	5,083	12.1	910	2.2	5,993	14.3	350	0.8
89	43,272	7,057	16.3	5,034	11.6	1,662	3.8	6,696	15.5	426	1.0
90	43,024	6,911	16.1	4,463	10.4	2,270	5.3	6,733	15.6	419	1.0
91	42,676	6,846	16.0	3,909	9.2	2,608	6.1	6,517	15.3	393	0.9
92	41,727	6,646	15.9	3,445	8.3	3,008	7.2	6,453	15.5	337	0.8
93	40,043	6,314	15.8	3,241	8.1	3,051	7.6	6,292	15.7	378	0.9
94	39,554	6,214	15.7	3,241	8.2	3,266	8.3	6,507	16.5	342	0.9
95	38,462	6,061	15.8	2,793	7.3	3,619	9.4	6,412	16.7	339	0.9
96	37,312	6,069	16.3	2,669	7.2	3,737	10.0	6,406	17.2	346	0.9
97	36,387	6,005	16.5	2,617	7.2	3,873	10.6	6,490	17.8	280	0.8
98	37,432	6,461	17.3	2,421	6.5	4,087	10.9	6,508	17.4	261	0.7
99	37,898	7,234	19.1	2,464	6.5	4,152	11.0	6,616	17.5	264	0.7
00	36,711	7,405	20.2	2,226	6.1	3,906	10.6	6,132	16.7	216	0.6

Source: Canadian Institute of Health Information Inpatient Files, Alberta Health and Wellness.

ICD-9 codes: All ICD-9 codes are based on the first three diagnostic codes and the first three procedure codes in the Hospital Morbidity Files.

1. Hospital delivery: Diagnostic codes 640-648 if 5th digit=1 or 2 or 650 or 651-676 if 5th digit=1 or 2 or V27 or procedure codes 72.0 to 74.99
2. Cesarean section: Procedure code 74.0, 74.1, 74.2, 74.4, 74.99.
3. Forceps: Procedure 72.0 or 72.1 or 72.2 or 72.21 or 72.29 or 72.3 or 72.31 or 72.39.
4. Vacuum Extraction: Procedure 72.7.
5. Vaginal breech: Diagnostic code 652.2 or procedure codes 72.5 or 72.6.
6. Rate = Cases / Total hospital deliveries x 100

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A18 Methods of Delivery by Residence RHA, Alberta, 1998 - 2000

Residence RHA[6,9]	Total hospital deliveries[1]	Cesarean Section[2]		Forceps[3]		Vacuum Extraction[4]		Vaginal Breech Delivery[5]	
		Cases	Rate[7]	Cases	Rate[7]	Cases	Rate[7]	Cases	Rate[7]
1998									
1	2,001	294	14.7	104	5.2	199	9.9	24	1.2
2	1,217	147	12.1	27	2.2	103	8.5	10	0.8
3	869	157	18.1	66	7.6	89	10.2	9	1.0
4	11,309	1,983	17.5	927	8.2	1,438	12.7	84	0.7
5	638	111	17.4	41	6.4	67	10.5	3	0.5
6	2,199	423	19.2	109	5.0	37	1.7	16	0.7
7	1,168	238	20.4	72	6.2	126	10.8	6	0.5
8	1,112	169	15.2	72	6.5	157	14.1	6	0.5
9	735	77	10.5	28	3.8	65	8.8	3	0.4
10	9,699	1,728	17.8	711	7.3	1,168	12.0	78	0.8
11	1,201	189	15.7	65	5.4	159	13.2	2	0.2
12	1,365	253	18.5	54	4.0	192	14.1	4	0.3
13	1,254	200	15.9	14	1.1	96	7.7	5	0.4
14	397	86	21.7	5	1.3	28	7.1	1	0.3
15	508	89	17.5	20	3.9	23	4.5	3	0.6
16	583	125	21.4	67	11.5	28	4.8	3	0.5
17	490	59	12.0	9	1.8	52	10.6	0	0.0
Unknown	687	133	19.4	30	4.4	60	8.7	4	0.6
Alberta	37,432	6,461	17.3	2,421	6.5	4,087	10.9	261	0.7
1999									
1	2,043	367	18.0	62	3.0	201	9.8	12	0.6
2	1,201	182	15.2	34	2.8	109	9.1	8	0.7
3	853	176	20.6	51	6.0	78	9.1	8	0.9
4	11,403	2,283	20.0	931	8.2	1,470	12.9	108	0.9
5	673	145	21.5	38	5.6	73	10.8	4	0.6
6	2,345	490	20.9	115	4.9	46	2.0	15	0.6
7	1,147	264	23.0	76	6.6	127	11.1	9	0.8
8	1,147	186	16.2	58	5.1	147	12.8	3	0.3
9	730	76	10.4	21	2.9	64	8.8	6	0.8
10	9,817	1,850	18.8	810	8.3	1,194	12.2	64	0.7
11	1,247	217	17.4	55	4.4	153	12.3	5	0.4
12	1,332	272	20.4	64	4.8	160	12.0	4	0.3
13	1,346	236	17.5	17	1.3	96	7.1	5	0.4
14	360	82	22.8	3	0.8	42	11.7	1	0.3
15	457	88	19.3	13	2.8	23	5.0	2	0.4
16	566	129	22.8	53	9.4	41	7.2	1	0.2
17	472	67	14.2	7	1.5	63	13.3	1	0.2
Unknown	759	124	16.3	56	7.4	65	8.6	8	1.1
Alberta	37,898	7,234	19.1	2,464	6.5	4,152	11.0	264	0.7
2000									
1	1,896	366	19.3	66	3.5	155	8.2	15	0.8
2	1,193	202	16.9	24	2.0	103	8.6	10	0.8
3	890	187	21.0	30	3.4	99	11.1	4	0.4
4	11,361	2,322	20.4	823	7.2	1,460	12.9	86	0.8
5	647	137	21.2	35	5.4	86	13.3	6	0.9
6	2,219	530	23.9	101	4.6	40	1.8	20	0.9
7	1,113	247	22.2	64	5.8	125	11.2	6	0.5
8	1,107	180	16.3	65	5.9	150	13.6	6	0.5
9	734	81	11.0	20	2.7	50	6.8	4	0.5
10	9,376	1,920	20.5	750	8.0	977	10.4	46	0.5
11	1,064	211	19.8	66	6.2	131	12.3	2	0.2
12	1,207	266	22.0	48	4.0	157	13.0	3	0.2
13	1,240	228	18.4	7	0.6	122	9.8	0	0.0
14	325	78	24.0	3	0.9	32	9.8	0	0.0
15	471	85	18.0	19	4.0	21	4.5	0	0.0
16	585	135	23.1	49	8.4	51	8.7	2	0.3
17	506	77	15.2	11	2.2	75	14.8	4	0.8
Unknown	777	153	19.7	45	5.8	72	9.3	2	0.3
Alberta	36,711	7,405	20.2	2,226	6.1	3,906	10.6	216	0.6

Source: Canadian Institute of Health Information Inpatient Files, Alberta Health and Wellness.

ICD-9 codes: All ICD-9 codes are based on the first three diagnostic codes and the first three procedure codes in the Hospital Morbidity Files.

1. Hospital delivery: Diagnostic codes 640-648 if 5th digit=1 or 2 or 650 or 651-676 if 5th digit=1 or 2 or V27 or procedure codes 72.0 to 74.99.
2. Cesarean section: Procedure code 74.0, 74.1, 74.2, 74.4, 74.99.
3. Forceps: Procedure 72.0 or 72.1 or 72.2 or 72.21 or 72.29 or 72.3 or 72.31 or 72.39
4. Vacuum Extraction: Procedure 72.7.
5. Vaginal breech: Diagnostic code 652.2 or procedure codes 72.5 or 72.6.
6. Other: Procedure 72.8 or 72.9 or 73.2 or 73.5 or 73.8 or 73.9.

Notes:

7. Rate = Cases / Total hospital deliveries x 100.
8. RHA boundaries are current as of April, 2001.
9. RHAs are by residence of mothers.

Data include 'out of province' cases.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A19 Cesarean Sections (All Weights), Primary and Repeat Rates by Facility RHA, Alberta, 1999

Facility RHA	Total Mothers Delivered	Pregnancies Delivered by Cesarean Section		Primary Cesarean Section			Repeat Cesarean Section		Cesarean Section Perinatal & Neonatal Deaths		Trial of Labour		VBAC[1]		
		Total	Rate[2]	Cases	Rate[3]	% of total[4]	Cases	Rate[5]	Cases	Rate[6]	Attempted[7]	Attempted Rate[8]	Successful	Rate[9]	Success Rate[10]
1	2,104	391	18.6	233	11.1	59.6	158	7.5	2	5.1	94	39.8	78	33.1	83.0
2	1,234	161	13.0	113	9.2	70.2	48	3.9	3	18.6	44	54.3	33	40.7	75.0
3	530	90	17.0	55	10.4	61.1	35	6.6	0	0.0	7	16.7	7	16.7	100.0
4	12,299	2,515	20.4	1,765	14.4	70.2	750	6.1	20	8.0	668	54.4	478	38.9	71.6
5	360	65	18.1	37	10.3	56.9	28	7.8	0	0.0	11	30.6	8	22.2	72.7
6	2,406	492	20.4	326	13.5	66.3	166	6.9	4	8.1	82	33.2	81	32.8	98.8
7	821	172	21.0	124	15.1	72.1	48	5.8	4	23.3	27	38.0	23	32.4	85.2
8	437	56	12.8	42	9.6	75.0	14	3.2	0	0.0	16	59.3	13	48.1	81.3
9	605	43	7.1	18	3.0	41.9	25	4.1	0	0.0	36	60.0	35	58.3	97.2
10	12,183	2,387	19.6	1,563	12.8	65.5	824	6.8	29	12.1	611	46.3	496	37.6	81.2
11	554	77	13.9	55	9.9	71.4	22	4.0	0	0.0	16	43.2	15	40.5	93.8
12	1,085	194	17.9	125	11.5	64.4	69	6.4	1	5.2	41	39.8	34	33.0	82.9
13	1,285	241	18.8	148	11.5	61.4	93	7.2	4	16.6	37	28.9	35	27.3	94.6
14	358	76	21.2	50	14.0	65.8	26	7.3	0	0.0	10	28.6	9	25.7	90.0
15	360	49	13.6	33	9.2	67.3	16	4.4	0	0.0	6	27.3	6	27.3	100.0
16	619	127	20.5	75	12.1	59.1	52	8.4	0	0.0	38	46.3	30	36.6	78.9
17	418	45	10.8	33	7.9	73.3	12	2.9	0	0.0	22	71.0	19	61.3	86.4
Alberta	**37,658**	**7,181**	**19.1**	**4,795**	**12.7**	**66.8**	**2,386**	**6.3**	**67**	**9.3**	**1,766**	**46.6**	**1,400**	**37.0**	**79.3**

Source: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals.

Notes:

1. VBAC = Vaginal Birth After Cesarean.
2. (Total Cesarean Sections / Total Mothers Delivered) x 100.
3. (Primary Cesarean Sections / Total Mothers Delivered) x 100.
4. (Primary Cesarean Sections / Total Pregnancies Delivered by Cesarean Section) x 100.
5. (Repeat Cesarean Sections / Total Mothers Delivered) x 100.
6. (Cesarean Section Deaths (Stillbirths + Early Neonatal Deaths + Late Neonatal Deaths)/Total Pregnancies Delivered by Cesarean Section) x 1000.
7. Failed VBAC's + Succesful VBAC's.
8. (Attempted VBAC's / (Repeat Cesarean Sections + Successful VBAC's)) x 100.
9. (Successful VBAC's / (Repeat Cesarean Sections + Successful VBAC's)) x 100.
10. Successful VBAC's / Attempted VBAC's x 100.

Excludes out-of-hospital births.

RHA boundaries are current as of 2001.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A20 Cesarean Sections (All Weights), Primary and Repeat Rates by Facility RHA, Alberta, 2000

Facility RHA	Total Mothers Delivered	Pregnancies Delivered by Cesarean Section		Primary Cesarean Section			Repeat Cesarean Section		Cesarean Section Perinatal & Neonatal Deaths		Trial of Labour		VBAC[1]		
		Total	Rate[2]	Cases	Rate[3]	% of total[4]	Cases	Rate[5]	Cases	Rate[6]	Attempted[7]	Attempted Rate[8]	Successful	Rate[9]	Success Rate[10]
1	1,975	382	19.3	258	13.1	67.5	124	6.3	1	2.6	81	43.1	64	34.0	79.0
2	1,194	191	16.0	144	12.1	75.4	47	3.9	1	5.2	41	53.2	30	39.0	73.2
3	590	108	18.3	83	14.1	76.9	25	4.2	0	0.0	13	35.1	12	32.4	92.3
4	12,305	2,551	20.7	1,739	14.1	68.2	812	6.6	14	5.5	683	52.8	481	37.2	70.4
5	340	61	17.9	38	11.2	62.3	23	6.8	1	16.4	9	32.1	5	17.9	55.6
6	2,262	555	24.5	349	15.4	62.9	206	9.1	3	5.4	98	34.6	77	27.2	78.6
7	756	164	21.7	98	13.0	59.8	66	8.7	0	0.0	31	33.3	27	29.0	87.1
8	394	61	15.5	44	11.2	72.1	17	4.3	1	16.4	22	61.1	19	52.8	86.4
9	535	30	5.6	14	2.6	46.7	16	3.0	0	0.0	29	64.4	29	64.4	100.0
10	11,637	2,441	21.0	1,636	14.1	67.0	805	6.9	23	9.4	535	44.5	398	33.1	74.4
11	500	71	14.2	52	10.4	73.2	19	3.8	1	14.1	11	40.7	8	29.6	72.7
12	949	201	21.2	147	15.5	73.1	54	5.7	1	5.0	23	30.3	22	28.9	95.7
13	1,220	234	19.2	138	11.3	59.0	96	7.9	2	8.5	43	32.8	35	26.7	81.4
14	325	70	21.5	41	12.6	58.6	29	8.9	1	14.3	6	17.1	6	17.1	100.0
15	354	47	13.3	30	8.5	63.8	17	4.8	0	0.0	7	29.2	7	29.2	100.0
16	626	138	22.0	94	15.0	68.1	44	7.0	3	21.7	35	47.3	30	40.5	85.7
17	430	52	12.1	34	7.9	65.4	18	4.2	0	0.0	17	50.0	16	47.1	94.1
Alberta	**36,392**	**7,357**	**20.2**	**4,939**	**13.6**	**67.1**	**2,418**	**6.6**	**52**	**7.1**	**1,684**	**45.7**	**1,266**	**34.4**	**75.2**

Source: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals.

Notes:

1. VBAC = Vaginal Birth After Cesarean.
2. (Total Cesarean Sections / Total Mothers Delivered) x 100.
3. (Primary Cesarean Sections / Total Mothers Delivered) x 100.
4. (Primary Cesarean Sections / Total Pregnancies Delivered by Cesarean Section) x 100.
5. (Repeat Cesarean Sections / Total Mothers Delivered) x 100.
6. (Cesarean Section Deaths (Stillbirths + Early Neonatal Deaths + Late Neonatal Deaths)/Total Pregnancies Delivered by Cesarean Section) x 1000.
7. Failed VBAC's + Succcesful VBAC's.
8. (Attempted VBAC's / (Repeat Cesarean Sections + Successful VBAC's)) x 100.
9. (Successful VBAC's / (Repeat Cesarean Sections + Successful VBAC's)) x 100.
10. Successful VBAC's / Attempted VBAC's x 100.

Excludes out-of-hospital births.

RHA boundaries are current as of 2001.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A21 Cesarean Section and Vaginal Birth After Cesarean (VBAC) Rates, Alberta, 1992 - 2000

Year	Cesarean Section Rate[1]	Repeat Cesarean Section Rate[2]	Trial of Labour Rate[3]	VBAC Rate[4]	VBAC Success Rate[5]
92	15.9	5.9	51.0	40.0	77.0
93	15.7	5.9	52.0	39.0	74.0
94	15.8	5.7	60.5	43.0	71.0
95	15.8	5.5	58.3	42.9	73.6
96	16.2	5.5	58.3	44.0	75.5
97	16.5	6.0	56.5	38.8	68.7
98	17.0	5.8	54.4	41.5	76.4
99	19.1	6.3	46.6	37.0	79.3
00	20.2	6.6	45.7	34.4	75.2

Source: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals & Canadian Institute of Health Information Inpatient Files, Alberta Health and Wellness.

Notes:

1. Cesarean Sections / Total Mothers Delivered X 100.
2. (Repeat Cesarean Sections / Total Mothers Delivered) x 100.
3. Attempted Vaginal Births After Cesarean (VBAC's) / (Repeat Cesarean Sections + Successful VBAC's) X 100.
4. Successful VBAC's / (Repeat Cesarean Sections + Successful VBAC's) X 100.
5. Successful VBAC's / Attempted VBAC's X 100.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A22 Breech Deliveries by Level of Hospital, Alberta, 1999 & 2000

Level of hospital	1999					2000				
	Total Breech Births	Vaginal Delivery	% of Breech Vaginal delivery	Cesarean Section	% of Breech Cesarean delivery	Total Breech Births	Vaginal Delivery	% of Breech Vaginal delivery	Cesarean Section	% of Breech Cesarean delivery
Level III	464	128	27.6	336	72.4	507	120	23.7	387	76.3
Level II	747	135	18.1	612	81.9	692	93	13.4	599	86.6
Level I	213	49	23.0	164	77.0	208	28	13.5	180	86.5
Total	**1,424**	**312**	**21.9**	**1,112**	**78.1**	**1,407**	**241**	**17.1**	**1,166**	**82.9**

Source: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals & Canadian Institute of Health and Wellness Inpatient Files, Alberta Health and Wellness.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A23a Breech Presentation Mortality Rates by Level of Hospital, Alberta, 1999

Perinatal Mortality

Level of hospital	Stillbirths	Early Neonatal Deaths	Perinatal Deaths With Anomalies	Perinatal Mortality Rate (PMR)[1]	Corrected PMR[2]	Perinatal Death Vaginal Delivery	PMR for Vaginal Delivery[1]	Perinatal Death Cesarean Section	PMR for Cesarean Section[1]
Level III	40	24	25	137.9	88.8	55	429.7	9	26.8
Level II	25	11	5	48.2	41.8	33	244.4	3	4.9
Level I	7	2	0	42.3	42.3	9	183.7	0	0.0
Total	72	37	30	76.5	56.7	97	310.9	12	10.8

Neonatal Mortality

Level of hospital	Early Neonatal Deaths	Late Neonatal Deaths	Neonatal Deaths With Anomalies	Neonatal Mortality Rate (NMR)[3]	Corrected NMR[2]	Neonatal Death Vaginal Delivery	NMR for Vaginal Delivery[3]	Neonatal Death Cesarean Section	NMR for Cesarean Section[3]
Level III	24	3	11	63.7	38.7	18	202.2	9	26.9
Level II	11	0	3	15.2	11.1	9	81.1	2	3.3
Level I	2	1	0	14.6	14.6	2	47.6	1	6.1
Total	37	4	14	30.3	20.2	29	119.8	12	10.8

Source: Statistics reported to the Reproductive Care Committee by Medical Records Departments of the hospitals.

Notes:
1. Rate per 1,000 total breech presentation births.
2. Corrected rates exclude deaths due to major anomalies.
3. Rate per 1,000 live breech presentation births.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A23b Breech Presentation Mortality Rates by Level of Hospital, Alberta, 2000

Perinatal Mortality

Level of hospital	Stillbirths	Early Neonatal Deaths	Perinatal Deaths With Anomalies	Perinatal Mortality Rate (PMR)[1]	Corrected PMR[2]	Perinatal Death Vaginal Delivery	PMR for Vaginal Delivery[1]	Perinatal Death Cesarean Section	PMR for Cesarean Section[1]
Level III	38	32	31	138.1	81.9	61	508.3	9	23.3
Level II	26	7	5	47.7	40.8	30	322.6	3	5.0
Level I	6	0	0	28.8	28.8	4	142.9	2	11.1
Total	70	39	36	77.5	53.2	95	394.2	14	12.0

Neonatal Mortality

Level of hospital	Early Neonatal Deaths	Late Neonatal Deaths	Neonatal Deaths With Anomalies	Neonatal Mortality Rate (NMR)[3]	Corrected NMR[2]	Neonatal Death Vaginal Delivery	NMR for Vaginal Delivery[3]	Neonatal Death Cesarean Section	NMR for Cesarean Section[3]
Level III	32	4	12	76.8	52.5	24	289.2	12	31.1
Level II	7	0	1	10.5	9.0	5	73.5	2	3.3
Level I	0	1	1	5.0	0.0	0	0.0	1	5.6
Total	39	5	14	32.9	22.7	29	165.7	15	12.9

Source: Statistics reported to the Reproductive Care Committee by Medical Records Departments of the hospitals.

Notes:
1. Rate per 1,000 total breech presentation births.
2. Corrected rates exclude deaths due to major anomalies.
3. Rate per 1,000 live breech presentation births.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A24 Breech Presentation Mortality Rates, Alberta, 1994 - 2000

Perinatal Mortality

Year	Stillbirths	Early Neonatal Deaths	Perinatal Deaths With Anomalies	Perinatal Mortality Rate (PMR)[1]	Corrected PMR[2]	Perinatal Death Vaginal Delivery	PMR for Vaginal Delivery[1]	Perinatal Death Cesarean Section	PMR for Cesarean Section[1]
94	68	47	25	69.5	55.2	92	164.9	23	21.0
95	62	54	27	71.2	55.5	97	193.2	19	16.8
96	79	44	31	79.2	60.4	104	214.4	19	17.8
97	74	44	31	83.2	62.7	102	286.5	16	15.1
98	51	27	27	42.5	28.2	68	97.7	10	8.8
99	72	37	30	76.5	56.7	97	310.9	12	10.8
00	70	39	36	77.5	53.2	95	394.2	14	12.0

Neonatal Mortality

Year	Early Neonatal Deaths	Late Neonatal Deaths	Neonatal Deaths With Anomalies	Neonatal Mortality Rate (NMR)[3]	Corrected NMR[2]	Neonatal Death Vaginal Delivery	NMR for Vaginal Delivery[3]	Neonatal Death Cesarean Section	NMR for Cesarean Section[3]
94	47	4	12	32.2	24.8	31	62.4	19	17.4
95	54	6	14	38.3	29.6	42	94.2	18	16.0
96	44	1	14	30.5	21.2	28	68.5	17	16.0
97	44	4	13	35.7	26.3	31	109.2	17	16.0
98	27	7	13	19.0	11.9	24	37.0	10	8.8
99	37	4	14	30.3	20.2	29	119.8	12	10.8
00	39	5	14	32.9	22.7	29	165.7	15	12.9

Source: Statistics reported to the Reproductive Care Committee by Medical Records Departments of the hospitals.

Notes:

1 Rate per 1,000 total breech presentation births.

2 Corrected rates exclude deaths due to major anomalies.

3 Rate per 1,000 live breech presentation births.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A25 Selected Indicators by Maternal Age Group, Alberta, 1998 - 2000 Combined

Indicator	Maternal Age Group (years)						
	Total[1]	<20	20-24	25-29	30-34	35-39	>39
Small for gestational age singleton rate per 100 live singleton births	**8.4**	10.1	9.0	8.1	7.6	8.6	9.3
Large for gestational age rate per 100 live births	**11.8**	9.3	10.1	12.1	12.8	12.8	14.5
Average birth weight for singleton term births	**3,483**	3,425	3,461	3,491	3,502	3,483	3,491
Low birth weight rate per 100 live births	**6.1**	6.9	5.8	5.4	6.1	7.4	8.6
High birth weight rate per 100 live births	**12.6**	9.9	11.5	13.0	13.5	12.9	13.6
Preterm rate per 100 live births	**7.9**	8.5	7.5	7.2	7.9	9.5	10.6
Multiple birth rate per 100 live births	**2.8**	1.2	1.8	2.5	3.5	4.1	4.2
Midwife attendant rate per 1,000 live births	**5.3**	0.8	2.6	4.4	6.4	10.8	15.8
Stillbirths (per 1,000 total births)	**6.1**	7.7	5.4	5.7	5.9	6.7	12.4

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.
Vital Statistics, Stillbirth File, Department of Government Services, January 2002 release.

Note: 1. Total includes all births for which maternal age is known.
Data include Alberta residents only.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A26 Mean Maternal Age at Stillbirth, First Live Birth, and Live Birth, Alberta, and Live Birth, Canada, 1986 - 2000

Year	Stillbirth Alberta	First Live Birth Alberta	Live Birth Alberta	Live Birth Canada[1]
86	26.6	24.8	26.7	27.5
87	26.7	25.0	26.9	27.7
88	26.4	25.2	27.1	27.9
89	27.8	25.2	27.2	28.0
90	27.4	25.3	27.3	28.1
91	27.0	25.2	27.3	28.2
92	27.2	25.5	27.5	28.4
93	27.7	25.7	27.6	28.5
94	28.3	25.8	27.7	28.7
95	28.3	25.9	27.8	28.8
96	28.5	26.1	28.0	28.4
97	28.4	26.2	28.1	28.5
98	28.3	26.2	28.1	28.7
99	28.6	26.2	28.2	28.7
00	28.5	26.3	28.3	-

Sources: Vital Statistics, Birth File, Department of Government Services, January 2002 release.
Vital Statistics, Stillbirth File, Department of Government Services, January 2002 release.
Births and Deaths, 1995, Statistics Canada.
Births and Deaths, 1996, Statistics Canada (shelf tables).
Births 1997, Statistics Canada (shelf tables).
Deaths 1997, Statistics Canada (shelf tables).
Births 1998, Statistics Canada (shelf tables).
Deaths 1998, Statistics Canada (shelf tables).

Note: 1. Canadian data for 1999 and 2000 are not available.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A27 Selected Maternal Pre-Pregnancy Conditions, Alberta, 1999 and 2000 Combined

Condition	Cases[1]	Rate[2]
Maternal weight of 91 kilograms or more	5,379	7.4
Pre-existing diabetes	471	0.7
Heart disease	578	0.8
Pre-existing hypertension	411	0.6
Chronic renal disease	73	0.1

Sources: Northern and Central Alberta Perinatal Outreach Program
Southern Alberta Perinatal Outreach Program

Notes: 1. Cases = Number of women with the specified condition on the antenatal risk assessment portion of the Alberta Prenatal Record.

2. Rate is per 100 women with completed antenatal risk assessments on the Alberta Prenatal Record. There were 70,761 women with completed antenatal risk assessments for 1999 and 2000 combined.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A28 Selected Problems in Pregnancy, Alberta, 1999 and 2000 Combined

Condition	Cases[1]	Rate[2]
Prenatal bleeding		
At less than 20 weeks gestation only	3,690	5.2
At 20 weeks gestation or later only	1,949	2.8
Both before and after 20 weeks gestation	458	0.6
Pregnancy-induced hypertension	3,409	4.8
Gestational diabetes	2,240	3.2

Sources: Northern and Central Alberta Perinatal Outreach Program
Southern Alberta Perinatal Outreach Program

Notes: 1. Cases = Number of women with the specified condition on the antenatal risk assessment portion of the Alberta Prenatal Record.

2. Rate is per 100 women with completed antenatal risk assessments on the Alberta Prenatal Record. There were 70,761 women with completed antenatal risk assessments for 1999 and 2000 combined.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A29 Gestational Diabetes Rate by Maternal Age Group, Alberta, 1999 and 2000 Combined

Maternal Age Group (Years)	Cases[1]	N[2]	Rate[3]
<15	2	39	-
15-19	45	4,783	0.9
20-24	191	14,548	1.3
25-29	557	21,684	2.6
30-34	762	19,066	4.0
35-39	546	8,759	6.2
³40	130	1,504	8.6
Unknown	7	378	
Alberta	2,240	70,761	3.2

Sources: Northern and Central Alberta Perinatal Outreach Program
Southern Alberta Perinatal Outreach Program

Notes: 1. Cases = Number of women with the specified condition on the antenatal risk assessment portion of the Alberta Prenatal Record.

2. N = Number of women with completed antenatal risk assesment on the Alberta Prenatal Record.

3. Rate is per 100 women in each age group with completed antenatal risk assessments on the Alberta Prenatal Record. A rate is not provided for the <15 age group due to the low number ofcases in this group.

Data may differ from previously published data due to differences in definitions and dates d data extraction.

Table A30 Maternal Prenatal Behaviours, Alberta, 1998 - 2000

Year	Smoking During Pregnancy				Alcohol Consumption During Pregnancy				Street Drug Use During Pregnancy				Prenatal Class Attendance[1]			
	No		Yes and/or Quit		No		Yes		No		Yes		No		Yes	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
98	26,337	73.2	9,628	26.8	33,952	95.6	1,556	4.4	34,753	98.4	577	1.6	4,827	36.1	8,555	63.9
99	27,036	74.3	9,357	25.7	34,414	95.7	1,529	4.3	35,085	98.5	538	1.5	4,839	35.8	8,689	64.2
00	26,808	75.4	8,723	24.6	33,639	96.0	1,401	4.0	33,576	98.1	666	1.9	4,925	37.7	8,134	62.3
Total	**80,181**	**74.3**	**27,708**	**25.7**	**102,005**	**95.8**	**4,486**	**4.2**	**103,414**	**98.3**	**1,781**	**1.7**	**14,591**	**36.5**	**25,378**	**63.5**

Source: Vital Statistics, Birth File, Department of Government Services, April 2002 release.

Notes: 1. Prenatal class attendance data are for first births only.

Only live births with available information on the relevant maternal behaviour are included.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A31 Selected Indicators for Live Births, by Maternal Prenatal Behaviours, Alberta, 1998 - 2000 Combined

Indicator	Smoking During Pregnancy		Alcohol Consumption During Pregnancy		Street Drug Use During Pregnancy		Prenatal Class Attendance[1]	
	No	Yes and/or Quit	No	Yes	No	Yes	No	Yes
Mean Maternal Age (Years)	29.1	25.8	28.3	26.6	28.3	23.7	24.9	27.0
Mean Birth Weight (Grams)	3,429	3,266	3,391	3,317	3,392	3,177	3,235	3,404
Low Birth Weight Rate (per 100 Live Births)	5.2	8.3	5.8	8.3	5.8	12.7	9.5	4.1
Pre-term Birth Rate (per 100 Live Births)	7.3	9.1	7.7	10.0	7.6	14.9	11.4	6.0

Source: Vital Statistics, Birth File, Department of Government Services, April 2002 release.

Notes: 1. Prenatal class attendance data are for first births only.

Only live births with available information on the relevant maternal behaviour are included.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A32 Maternal Prenatal Behaviours by Residence RHA, Alberta, 1998 - 2000 Combined

RHA	Smoking During Pregnancy			Alcohol Consumption During Pregnancy			Street Drug Use During Pregnancy			Prenatal Class Attendance[2]		
	Live Births[1]	Cases	%	Live Births[1]	Cases	%	Live Births[1]	Cases	%	Live Births[1]	Cases	%
1	5,969	1,474	24.7	5,899	388	6.6	5,855	54	0.9	2,011	1,454	72.3
2	3,553	1,055	29.7	2,791	91	3.3	2,740	36	1.3	1,355	886	65.4
3	2,577	561	21.8	2,560	111	4.3	2,533	27	1.1	893	584	65.4
4	34,180	6,413	18.8	34,015	799	2.3	33,730	407	1.2	13,571	9,032	66.6
5	1,757	497	28.3	1,731	56	3.2	1,722	24	1.4	488	310	63.5
6	7,039	2,343	33.3	6,990	795	11.4	6,892	151	2.2	2,525	1,434	56.8
7	2,826	720	25.5	2,820	113	4.0	2,778	23	0.8	950	622	65.5
8	3,209	1,009	31.4	3,166	98	3.1	3,122	41	1.3	1,146	823	71.8
9	1,832	766	41.8	1,839	185	10.1	1,784	53	3.0	564	319	56.6
10	28,684	7,143	24.9	28,496	918	3.2	28,143	643	2.3	11,008	6,774	61.5
11	3,495	1,154	33.0	3,465	130	3.8	3,418	51	1.5	1,149	743	64.7
12	3,828	1,383	36.1	3,806	170	4.5	3,754	99	2.6	1,187	694	58.5
13	3,766	1,218	32.2	3,791	238	6.3	3,713	52	1.4	1,446	884	61.1
14	1,063	391	36.8	1,051	88	8.4	1,029	13	1.3	369	199	53.9
15	996	477	47.9	987	80	8.1	953	40	4.2	287	113	39.4
16	1,747	625	35.8	1,748	121	6.9	1,732	54	3.1	779	413	53.0
17	1,335	476	35.7	1,323	103	7.8	1,285	13	1.0	238	92	38.7
Unknown	13	3		13	2		12	0		3	2	
Alberta	107,889	27,708	25.7	106,491	4,486	4.2	105,195	1,781	1.7	39,969	25,378	63.5

Source: Vital Statistics, Birth File, Department of Government Services, April 2002 release.

Notes:
1. Only live births with available information on the relevant maternal behaviour are included.
2. Prenatal class attendance data are for first births only.

Data include Alberta residents only.

RHA boundaries are current as of April, 2001

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A33 Live Births and General Fertility Rates by Residence RHA, Alberta, 1986 - 2000

Residence RHA	Year 86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
Live Births															
1	2,440	2,422	2,310	2,463	2,443	2,354	2,402	2,344	2,323	2,292	2,151	2,244	2,060	2,078	1,961
2	1,320	1,185	1,227	1,270	1,274	1,199	1,202	1,146	1,134	1,269	1,161	1,184	1,239	1,227	1,215
3	877	835	824	875	881	872	900	857	892	834	847	908	886	863	910
4	12,059	11,965	11,981	12,642	12,495	12,259	12,148	11,454	11,512	11,271	11,149	11,048	11,577	11,703	11,738
5	718	702	681	662	689	673	675	639	637	668	650	622	624	639	626
6	3,000	2,764	2,698	2,799	2,740	2,807	2,736	2,767	2,536	2,531	2,520	2,429	2,494	2,553	2,413
7	1,330	1,325	1,284	1,273	1,245	1,159	1,128	1,150	1,164	1,059	1,034	989	1,008	978	932
8	1,239	1,157	1,156	1,206	1,180	1,170	1,231	1,116	1,129	1,227	1,151	1,152	1,136	1,156	1,135
9	784	772	737	786	849	804	860	730	757	725	655	651	625	645	625
10	12,768	12,070	12,380	12,380	12,418	12,555	11,938	11,519	11,071	10,525	10,136	9,523	9,929	9,989	9,533
11	1,445	1,388	1,408	1,485	1,407	1,525	1,445	1,404	1,426	1,315	1,286	1,198	1,247	1,295	1,096
12	1,696	1,666	1,558	1,646	1,567	1,540	1,582	1,525	1,497	1,423	1,384	1,379	1,385	1,351	1,243
13	1,409	1,349	1,348	1,344	1,248	1,314	1,287	1,223	1,256	1,309	1,297	1,247	1,292	1,382	1,261
14	472	475	414	439	447	431	417	389	427	408	404	364	396	364	321
15	518	513	481	552	511	539	550	542	592	545	529	500	522	472	485
16	773	683	744	701	764	672	670	633	577	574	599	568	589	581	599
17	456	436	438	456	475	496	502	467	529	553	518	540	515	488	516
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	3	7	4
Alberta	**43,304**	**41,707**	**41,669**	**42,979**	**42,633**	**42,369**	**41,673**	**39,905**	**39,459**	**38,528**	**37,471**	**36,546**	**37,527**	**37,771**	**36,613**
General Fertility Rate (per 1,000 Women Aged 15-49)[1]															
1	71.3	70.4	67.0	71.5	70.0	66.8	67.6	65.7	64.7	63.4	59.2	61.4	56.2	56.0	52.4
2	64.5	58.3	60.3	62.4	62.0	58.0	58.2	55.2	53.5	59.0	52.9	53.2	54.4	52.6	51.4
3	64.2	60.0	57.7	60.1	58.5	56.2	56.3	51.8	52.2	47.4	46.5	48.4	46.0	43.2	44.4
4	58.1	57.5	56.6	58.7	56.6	54.6	53.5	50.1	50.0	48.3	46.9	45.2	45.6	44.7	44.0
5	64.0	62.9	61.0	59.2	60.6	58.2	57.0	52.9	51.9	53.2	51.1	48.5	47.3	46.9	45.6
6	75.0	69.1	67.1	68.9	66.1	66.7	63.9	64.0	58.1	57.4	56.6	53.8	53.4	53.2	49.3
7	55.9	56.5	55.2	55.0	53.9	49.8	47.8	48.4	48.3	43.8	42.4	40.3	40.5	39.3	37.2
8	63.3	59.4	58.7	60.0	57.6	55.4	56.8	51.0	50.8	53.2	49.1	48.4	47.0	46.7	45.8
9	78.2	76.2	72.1	75.6	80.3	73.8	77.6	65.4	67.7	64.3	57.6	56.4	53.1	54.0	51.8
10	61.4	57.7	58.9	58.5	57.7	57.7	54.3	51.9	50.3	48.4	46.8	43.8	45.2	44.6	42.2
11	69.8	67.3	67.4	70.3	65.2	69.5	64.3	61.4	61.3	56.8	55.5	51.8	53.6	54.6	46.1
12	71.3	70.9	66.0	69.7	66.6	65.5	66.8	64.2	63.2	60.2	58.9	58.1	57.3	55.9	51.6
13[2]	-	-	-	-	60.5	63.2	61.5	59.0	60.2	60.8	58.4	55.0	55.1	57.4	51.9
14[2]	-	-	-	-	67.4	65.3	63.8	60.3	65.6	62.8	62.4	56.7	61.7	56.4	50.0
15	93.9	91.8	83.8	96.2	87.3	90.5	91.1	88.3	94.1	84.2	80.8	75.0	77.5	69.3	70.3
16	63.4	59.8	65.9	61.3	66.4	57.5	57.0	54.4	50.6	51.3	53.5	48.5	48.4	46.9	47.0
17	122.3	116.2	114.5	117.4	123.6	125.8	126.0	114.5	126.6	128.8	116.9	114.5	104.9	96.7	102.4
Alberta	**63.5**	**61.2**	**60.6**	**61.9**	**60.3**	**59.1**	**57.5**	**54.6**	**53.7**	**52.2**	**50.3**	**48.3**	**48.5**	**47.7**	**45.6**

Sources: Vital Statistics, Birth File, Department of Government Services, January 2002 release.
Alberta Health Care Insurance Plan Registration File, Alberta Health and Wellness.

Notes:
1. General fertility rate (GFR) refers to total number of live births per 1,000 women aged 15-49.
2. Population estimations for regions 13 and 14 are not available for years 1986 through 1989.
Populations are estimated at June 30, as viewed at December 31 of each year.
RHA boundaries are current as of 2001.
Data include Alberta residents only.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A34 Live Births and Percentage of Live Births by Age Group of Mother, and Age-Specific Fertility Rates, Alberta, 1986 - 2000

Year	Total	Maternal Age Group (Years)										
		<15	15- 17	18-19	15-19	20-24	25-29	30-34	35-39	40-44	>44	Unknown
Live Births												
86	43,304	26	1,064	2,068	3,132	11,414	16,767	9,480	2,267	209	9	0
87	41,707	34	995	2,035	3,030	10,303	16,046	9,610	2,418	258	8	0
88	41,669	34	956	2,044	3,000	9,730	15,966	9,972	2,620	339	8	0
89	42,979	34	1,017	2,112	3,129	9,659	16,060	10,843	2,927	312	15	0
90	42,633	36	1,051	2,206	3,257	9,351	15,525	10,874	3,228	352	10	0
91	42,369	47	1,141	2,243	3,384	9,282	14,792	10,988	3,469	389	18	0
92	41,673	52	1,151	2,082	3,233	8,951	14,090	11,372	3,549	420	5	1
93	39,905	36	1,087	1,892	2,979	8,639	13,234	10,955	3,615	429	17	1
94	39,459	38	1,021	1,976	2,997	8,204	12,914	10,998	3,814	480	13	1
95	38,528	28	1,003	1,985	2,988	8,068	12,221	10,826	3,916	466	15	0
96	37,471	31	914	1,770	2,684	7,551	11,851	10,598	4,174	566	16	0
97	36,546	27	828	1,696	2,524	7,350	11,689	10,042	4,237	663	12	2
98	37,527	25	862	1,731	2,593	7,708	11,717	10,464	4,338	646	24	12
99	37,771	23	840	1,736	2,576	7,854	11,666	10,274	4,604	738	34	2
00	36,613	16	737	1,680	2,417	7,468	11,285	10,029	4,616	767	13	2
Percentage of Live Births												
86	100	0.1	2.5	4.8	7.2	26.4	38.7	21.9	5.2	0.5	0.0	0.0
87	100	0.1	2.4	4.9	7.3	24.7	38.5	23.0	5.8	0.6	0.0	0.0
88	100	0.1	2.3	4.9	7.2	23.4	38.3	23.9	6.3	0.8	0.0	0.0
89	100	0.1	2.4	4.9	7.3	22.5	37.4	25.2	6.8	0.7	0.0	0.0
90	100	0.1	2.5	5.2	7.6	21.9	36.4	25.5	7.6	0.8	0.0	0.0
91	100	0.1	2.7	5.3	8.0	21.9	34.9	25.9	8.2	0.9	0.0	0.0
92	100	0.1	2.8	5.0	7.8	21.5	33.8	27.3	8.5	1.0	0.0	0.0
93	100	0.1	2.7	4.7	7.5	21.6	33.2	27.5	9.1	1.1	0.0	0.0
94	100	0.1	2.6	5.0	7.6	20.8	32.7	27.9	9.7	1.2	0.0	0.0
95	100	0.1	2.6	5.2	7.8	20.9	31.7	28.1	10.2	1.2	0.0	0.0
96	100	0.1	2.4	4.7	7.2	20.2	31.6	28.3	11.1	1.5	0.0	0.0
97	100	0.1	2.3	4.6	6.9	20.1	32.0	27.5	11.6	1.8	0.0	0.0
98	100	0.1	2.3	4.6	6.9	20.5	31.2	27.9	11.6	1.7	0.1	0.0
99	100	0.1	2.2	4.6	6.8	20.8	30.9	27.2	12.2	2.0	0.1	0.0
00	100	0.0	2.0	4.6	6.6	20.4	30.8	27.4	12.6	2.1	0.0	0.0
Age-Specific Fertility Rate (per 1,000 Women in Each Group)[1,2]												
	TFR[3]											
86	1,830	0.3	19.3	54.2	33.6	96.7	127.0	81.9	23.7	3.0	0.2	
87	1,792	0.4	18.6	54.5	32.9	92.3	123.4	81.1	25.2	3.4	0.1	
88	1,806	0.4	17.3	53.6	32.8	91.1	124.2	82.1	26.7	4.2	0.1	
89	1,875	0.4	18.8	55.9	34.6	94.2	126.5	87.4	28.5	3.7	0.2	
90	1,861	0.4	19.8	57.4	36.2	92.4	124.2	85.4	29.9	3.9	0.2	
91	1,861	0.5	21.9	58.4	37.7	92.3	122.2	85.0	30.6	4.1	0.3	
92	1,843	0.5	21.9	55.6	35.8	90.4	120.9	87.0	30.0	4.4	0.1	
93	1,790	0.4	20.5	51.8	32.8	88.4	119.0	83.6	29.6	4.4	0.2	
94	1,805	0.4	18.8	54.8	32.6	86.1	121.8	85.0	30.6	4.7	0.2	
95	1,793	0.3	18.3	54.9	32.0	86.1	119.2	86.0	30.9	4.3	0.2	
96	1,757	0.3	16.4	48.5	28.1	81.3	117.0	87.3	32.5	5.0	0.2	
97	1,707	0.3	14.7	45.7	25.7	77.3	114.9	85.4	32.4	5.6	0.1	
98	1,728	0.2	14.8	46.3	25.4	78.4	112.5	91.3	32.6	5.2	0.2	
99	1,717	0.2	14.0	45.5	24.4	76.9	110.3	91.2	34.4	5.8	0.3	
00	1,660	0.1	11.8	42.4	22.3	72.1	106.5	90.4	34.8	5.8	0.1	

Sources: Vital Statistics, Birth File, Department of Government Services, January 2002 release.
Alberta Health Care Insurance Plan Registration File, Alberta Health and Wellness

Notes:
1. Age-specific fertility rate refers to number of live births per 1,000 women in a specific age group.
2. Age-specific fertility rates for age groups <15 and >44 are calculated based on female populations in the 10-14 and 45-49 age groups, respectively.
3. Total fertility rate (TFR) represents the average number of children a woman can expect to have in her lifetime, based on the fertility rates of a given year. TFR is equal to the sum of the age-specific fertility rates (ages 15 to 49).

Populations are estimated at June 30, as viewed at December 31 of each year.
Data include Alberta residents only.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A35 Age-Specific Fertility Rates[1,2] and Total Fertility Rate by Residence RHA, Alberta, 1998 - 2000

Residence RHA	TFR[3]	Age Group (Years) <15	15-17	18-19	15-19	20-24	25-29	30-34	35-39	40-44	>44
1998											
1	2,055	0.3	18.5	49.5	30.5	101.4	145.9	97.0	31.3	4.3	0.4
2	1,990	0.3	15.6	48.3	28.3	106.8	139.8	93.4	25.0	4.8	0.0
3	1,639	0.0	11.1	45.3	24.3	65.3	102.4	94.5	35.9	5.3	0.0
4	1,576	0.2	8.6	31.8	17.5	58.8	96.2	97.4	38.6	6.4	0.3
5	1,848	0.0	9.7	35.6	19.5	93.2	145.3	85.3	20.8	5.6	0.0
6	1,980	0.0	16.0	56.2	31.5	102.6	142.8	89.0	27.0	2.7	0.3
7	1,527	0.0	6.1	35.6	17.7	72.6	109.6	78.7	24.0	2.3	0.6
8	1,804	0.5	15.7	45.3	26.9	86.1	133.3	82.7	28.3	3.4	0.3
9	1,927	0.0	22.6	53.4	33.8	102.7	142.6	79.2	23.1	4.0	0.0
10	1,596	0.2	13.3	38.2	23.1	66.7	102.2	88.4	33.0	5.4	0.2
11	2,050	0.0	17.6	49.0	29.6	106.8	154.1	88.3	25.9	4.9	0.3
12	2,076	0.2	20.5	68.3	39.2	108.6	148.7	89.0	26.5	3.1	0.0
13	1,922	0.3	20.5	64.2	37.4	114.9	125.7	77.0	24.3	5.0	0.0
14	2,254	0.9	26.0	82.5	47.4	117.2	170.7	87.6	21.0	7.0	0.0
15	2,461	3.2	48.8	68.1	56.6	159.9	138.0	107.0	27.2	3.6	0.0
16	1,713	0.6	14.4	59.1	32.0	98.9	105.1	79.7	21.5	5.3	0.0
17	3,145	0.9	37.8	146.4	80.6	208.1	172.7	107.3	48.2	12.0	0.0
Alberta	**1,728**	**0.2**	**13.8**	**43.7**	**25.4**	**78.4**	**112.5**	**91.3**	**32.6**	**5.2**	**0.2**
1999											
1	2,070	0.2	15.1	52.0	29.7	107.9	143.6	97.0	31.8	3.8	0.2
2	1,938	0.3	16.5	56.9	31.9	101.5	135.1	92.2	22.7	3.9	0.3
3	1,560	0.4	10.9	42.1	23.4	52.1	102.1	94.6	35.1	4.7	0.0
4	1,556	0.1	9.4	29.7	17.2	56.4	92.9	95.7	41.5	7.0	0.4
5	1,821	0.4	7.5	46.8	22.6	89.6	142.4	77.2	28.8	3.6	0.0
6	1,992	0.4	13.5	54.7	29.3	105.3	134.7	97.7	27.0	4.2	0.2
7	1,540	0.0	6.4	25.7	13.9	75.8	122.1	74.0	18.6	3.0	0.6
8	1,822	0.0	13.9	42.5	24.8	81.8	135.0	90.9	27.6	3.9	0.3
9	1,980	0.5	25.4	71.1	42.6	125.9	126.8	72.3	25.6	2.8	0.0
10	1,588	0.3	12.4	36.5	21.9	63.9	99.9	88.8	36.0	6.7	0.3
11	2,122	0.0	14.8	54.1	29.7	106.4	159.9	95.8	28.0	3.9	0.6
12	2,069	0.5	20.7	57.3	34.5	112.2	148.7	87.7	26.7	3.9	0.3
13	2,034	0.0	17.0	57.1	32.5	115.2	142.8	86.9	25.4	3.9	0.4
14	2,045	0.0	21.7	68.8	39.9	128.1	131.7	69.2	31.0	7.7	1.3
15	2,259	1.5	32.4	122.8	65.8	160.1	120.6	80.1	18.4	6.8	0.0
16	1,687	0.0	16.9	50.6	30.2	96.3	113.9	76.6	19.5	1.0	0.0
17	2,921	0.9	39.0	130.7	73.2	196.9	171.1	95.9	34.1	12.9	0.0
Alberta	**1,717**	**0.2**	**13.0**	**42.4**	**24.4**	**76.9**	**110.3**	**91.2**	**34.4**	**5.8**	**0.3**
2000											
1	1,953	0.0	14.2	46.8	27.5	86.7	138.2	98.6	33.5	6.2	0.2
2	1,911	0.0	8.6	50.3	25.3	103.4	134.7	93.0	22.5	2.6	0.6
3	1,628	0.0	6.0	28.6	15.1	64.3	100.2	99.2	38.9	7.8	0.0
4	1,549	0.1	8.2	29.5	16.6	55.5	91.8	96.8	41.5	7.6	0.1
5	1,779	0.0	14.1	48.7	26.8	82.5	130.4	83.4	30.0	2.7	0.0
6	1,867	0.0	12.9	45.5	25.8	96.3	129.6	89.3	28.1	3.7	0.4
7	1,483	0.0	6.4	22.2	12.6	66.9	121.8	69.1	21.1	5.3	0.0
8	1,818	0.3	10.5	44.6	23.7	82.1	136.6	90.2	27.0	4.0	0.0
9	1,943	1.3	21.6	56.1	35.3	112.2	135.1	82.4	19.8	3.8	0.0
10	1,517	0.2	9.1	35.3	19.7	59.0	95.6	88.5	35.1	5.5	0.1
11	1,813	0.3	12.0	44.1	24.1	99.1	131.0	76.5	27.9	3.9	0.0
12	1,951	0.2	19.4	49.6	31.0	101.5	141.5	82.7	30.1	3.5	0.0
13	1,853	0.0	14.6	57.1	31.1	99.0	131.0	77.3	27.8	4.0	0.3
14	1,853	0.0	17.7	69.6	36.6	115.0	125.2	66.1	24.9	3.0	0.0
15	2,329	0.7	51.2	100.7	70.0	163.8	117.4	72.0	37.2	5.5	0.0
16	1,698	0.0	24.3	51.7	35.0	86.0	113.6	77.8	23.8	3.4	0.0
17	3,160	0.0	31.7	125.0	68.0	207.5	165.7	113.5	61.5	15.9	0.0
Alberta	**1,660**	**0.2**	**11.3**	**39.3**	**22.3**	**72.1**	**106.5**	**90.4**	**34.8**	**5.8**	**0.1**

Sources: Vital Statistics, Birth File, Department of Government Services, January 2002 release.
Alberta Health Care Insurance Plan Registration File, Alberta Health and Wellness.

Notes:
1. Age-specific fertility rate refers to number of live births per 1,000 women in a specific age group.
2. Age-specific fertility rates for age groups <15 and >44 are calculated based on female populations in the 10-14 and 45-49 age groups, respectively.
3. Total fertility rate (TFR) represents the average number of children a woman can expect to have in her lifetime, t on the fertility rates of a given year. TFR is equal to the sum of the age-specific fertility rates (aged 15 to 49).

Populations are estimated at June 30, as viewed at December 31 of each year.
RHA boundaries are current as of April, 2001
Data include Alberta residents only.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A36 Total Births by Level of Hospital, Alberta, 1986 - 2000

Level of Hospital	Year														
	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
Level III															
Royal Alexandra	5,833	5,220	4,816	4,740	4,717	4,592	4,477	4,623	4,620	4,885	5,089	4,709	4,624	4,528	4,165
University of Alberta	2,262	2,578	3,026	2,803	2,999	2,909	2,906	2,798	2,521	1,223	4	10	6	10	3
Foothills	3,935	3,914	3,773	3,727	3,448	3,286	3,437	3,264	3,264	4,368	4,404	4,425	4,381	4,471	4,301
Total	**12,030**	**11,712**	**11,615**	**11,270**	**11,164**	**10,787**	**10,820**	**10,685**	**10,405**	**10,476**	**9,497**	**9,144**	**9,011**	**9,009**	**8,469**
Percent of Total Births	**27.4**	**27.7**	**27.4**	**26.0**	**25.7**	**25.0**	**25.6**	**26.4**	**25.9**	**27.0**	**24.4**	**24.8**	**23.6**	**23.4**	**22.7**
Level II															
Grande Prairie[1]	0	0	0	0	0	0	0	0	0	1,023	1,005	1,032	1,078	1,123	1,066
Charles Camsell	1,021	913	934	900	858	756	619	189	0	0	0	0	0	0	0
Misericordia	3,447	3,141	3,470	3,141	3,113	3,007	2,906	2,699	2,569	2,598	2,602	2,478	2,585	2,652	2,697
Edmonton General/Grey Nuns	1,829	1,781	1,924	2,551	2,727	3,095	2,877	2,944	2,843	3,148	3,576	3,378	3,529	3,599	3,614
Calgary General/Peter Lougheed	3,030	2,797	2,584	3,087	3,339	3,405	3,593	3,619	3,641	3,734	3,769	3,739	3,857	3,817	4,081
Holy Cross/Rockyview	3,980	3,842	3,965	4,384	4,665	4,648	4,439	4,092	4,056	3,950	3,796	3,763	4,051	4,233	4,164
Grace	2,003	2,236	2,503	2,118	1,975	1,991	1,652	1,480	1,478	87	0	0	0	0	0
Lethbridge	1,178	1,143	1,113	1,442	1,454	1,460	1,634	1,643	1,695	1,670	1,587	1,696	1,608	1,630	1,613
Medicine Hat	987	885	909	996	969	923	898	853	831	936	844	909	947	912	918
Red Deer	1,949	1,785	1,743	1,862	1,799	1,892	1,917	1,890	1,769	1,725	1,688	1,649	1,731	1,777	1,735
Total	**19,424**	**18,523**	**19,145**	**20,481**	**20,899**	**21,177**	**20,535**	**19,409**	**18,882**	**18,871**	**18,867**	**18,644**	**19,386**	**19,743**	**19,888**
Percent of Total Births	**44.2**	**43.8**	**45.1**	**47.3**	**48.2**	**49.1**	**48.7**	**47.9**	**47.0**	**48.6**	**48.4**	**50.5**	**50.8**	**51.2**	**53.2**
Level I															
North	9,313	9,009	8,717	8,912	8,532	8,653	8,450	8,241	8,557	7,182	8,064	6,982	7,442	7,477	6,859
South	2,967	2,919	2,805	2,514	2,640	2,337	2,282	2,086	2,111	2,106	2,282	1,858	1,934	1,974	1,815
Total	**12,280**	**11,928**	**11,522**	**11,426**	**11,172**	**10,990**	**10,732**	**10,327**	**10,668**	**9,288**	**10,346**	**8,840**	**9,376**	**9,451**	**8,674**
Percent of Total Births	**28.0**	**28.2**	**27.1**	**26.4**	**25.7**	**25.5**	**25.4**	**25.5**	**26.5**	**23.9**	**26.6**	**24.0**	**24.6**	**24.5**	**23.2**
Out-of-Hospital Births	182	154	177	151	163	139	116	108	235	202	233	257	379	376	353
Percent of Total Births	**0.4**	**0.4**	**0.4**	**0.3**	**0.4**	**0.3**	**0.3**	**0.3**	**0.6**	**0.5**	**0.6**	**0.7**	**1.0**	**1.0**	**0.9**
Alberta	**43,916**	**42,317**	**42,459**	**43,328**	**43,398**	**43,093**	**42,203**	**40,529**	**40,190**	**38,837**	**38,943**	**36,885**	**38,152**	**38,579**	**37,384**

Source: Statistics reported to the Reproductive Care Committee by Canadian Institute of Health Information Inpatient Files, Alberta Health and Wellness.

Note: 1. Grande Prairie was a Level I hospital until 1995. Births from 1986 to 1994 for Grande Prairie are included in Level I North data.

Table A37 Live Births by Birth Weight Categories, Alberta, 1986 - 2000

Year	Birth Weight (Grams)					
	<500	<1000	<1500<2	500	≥4000	≥4500
Live Births						
86	0	157	349	2,375	4,810	727
87	0	154	359	2,276	4,540	683
88	0	153	383	2,413	4,440	583
89	0	192	399	2,527	4,703	700
90	42	178	389	2,513	4,745	712
91	27	158	365	2,440	4,656	651
92	29	176	382	2,434	4,766	691
93	32	151	314	2,263	4,605	719
94	41	178	364	2,227	4,493	640
95	44	189	371	2,308	4,372	646
96	35	184	388	2,279	4,364	697
97	34	159	368	2,251	4,174	635
98	28	164	367	2,328	4,633	642
99	31	184	375	2,241	4,763	765
00	47	213	423	2,249	4,713	779
Percentage of Live Births						
86	0.00	0.36	0.81	5.48	11.11	1.68
87	0.00	0.37	0.86	5.46	10.89	1.64
88	0.00	0.37	0.92	5.79	10.66	1.40
89	0.00	0.45	0.93	5.88	10.94	1.63
90	0.10	0.42	0.91	5.89	11.13	1.67
91	0.06	0.37	0.86	5.76	10.99	1.54
92	0.07	0.42	0.92	5.84	11.44	1.66
93	0.08	0.38	0.79	5.67	11.54	1.80
94	0.10	0.45	0.92	5.64	11.39	1.62
95	0.11	0.49	0.96	5.99	11.35	1.68
96	0.09	0.49	1.04	6.08	11.65	1.86
97	0.09	0.44	1.01	6.16	11.42	1.74
98	0.07	0.44	0.98	6.20	12.35	1.71
99	0.08	0.49	0.99	5.93	12.61	2.03
00	0.13	0.58	1.16	6.14	12.87	2.13

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Note: Data include Alberta residents only.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A38 Low Birth Weight Rate for Singleton Term Births, Alberta, 1986 - 2000

Year	Total Live Births	Live Singleton Term Births	Percent Live Singleton Term Births	Singleton Term Low Birth Weight Births	Singleton Term Low Birth Weight Rate
86	43,304	40,009	92.4	792	2.0
87	41,707	38,463	92.2	726	1.9
88	41,669	38,379	92.1	762	2.0
89	42,979	39,609	92.2	792	2.0
90	42,633	39,221	92.0	811	2.1
91	42,369	39,033	92.1	803	2.1
92	41,673	38,315	91.9	764	2.0
93	39,905	36,737	92.1	733	2.0
94	39,459	36,308	92.0	650	1.8
95	38,528	35,383	91.8	667	1.9
96	37,471	34,317	91.6	650	1.9
97	36,546	33,447	91.5	635	1.9
98	37,527	34,219	91.2	651	1.9
99	37,771	34,324	90.9	541	1.6
00	36,613	32,998	90.1	526	1.6

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Note: Date include Alberta residents only.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A39 Low Birth Weight (<2500 grams) Births by Term/Pre-term and Singleton/Multiple, Alberta, 1986 - 2000

Year	Total Low Birth Weight (LBW) Births	Term Low Birth Weight Births[1]						Preterm Low Birth Weight Births[1]					
		Singleton		Multiple		Total		Singleton		Multiple		Total	
		Cases	% of LBW Births	Cases	% of LBW Births	Cases	% of LBW Births	Cases	% of LBW Births	Cases	% of LBW Births	Cases	% of LBW Births
86	2,375	792	33.3	110	4.6	902	38.0	1,174	49.4	297	12.5	1,471	61.9
87	2,276	726	31.9	102	4.5	828	36.4	1,152	50.6	294	12.9	1,446	63.5
88	2,413	762	31.6	87	3.6	849	35.2	1,224	50.7	340	14.1	1,564	64.8
89	2,527	792	31.3	147	5.8	939	37.2	1,258	49.8	329	13.0	1,587	62.8
90	2,513	811	32.3	86	3.4	897	35.7	1,243	49.5	372	14.8	1,615	64.3
91	2,440	803	32.9	119	4.9	922	37.8	1,192	48.9	326	13.4	1,518	62.2
92	2,434	764	31.4	120	4.9	884	36.3	1,179	48.4	368	15.1	1,547	63.6
93	2,263	733	32.4	102	4.5	835	36.9	1,133	50.1	295	13.0	1,428	63.1
94	2,227	650	29.2	114	5.1	764	34.3	1,146	51.5	317	14.2	1,463	65.7
95	2,306	667	28.9	84	3.6	751	32.5	1,162	50.3	395	17.1	1,557	67.5
96	2,279	650	28.5	93	4.1	743	32.6	1,144	50.2	392	17.2	1,536	67.4
97	2,253	635	28.2	93	4.1	728	32.3	1,102	48.9	421	18.7	1,523	67.6
98	2,328	651	28.0	99	4.3	750	32.2	1,142	49.1	436	18.7	1,578	67.8
99	2,241	541	24.1	95	4.2	636	28.4	1,190	53.1	415	18.5	1,605	71.6
00	2,249	526	23.4	104	4.6	630	28.0	1,157	51.4	461	20.5	1,618	71.9

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Notes: 1. Low birth weight births with unknown gestation or gestation greater than 42 weeks are excluded from these columns.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A40 Low Birth Weight (<2500 grams) Live Births and Low Birth Weight Live Birth Rate by Age Group of Mother, Alberta, 1986 - 2000

Year	Total	Maternal Age Group (Years)						
		<20	20-24	25-29	30-34	35-39	>39	Unknown
Low Birth Weight Live Births								
86	2,375	219	627	860	530	124	15	0
87	2,276	184	600	813	507	157	15	0
88	2,413	202	587	858	562	179	25	0
89	2,527	234	552	932	590	190	29	0
90	2,513	216	566	851	655	200	25	0
91	2,440	236	525	789	657	206	27	0
92	2,434	195	543	815	642	212	27	0
93	2,263	214	499	693	597	232	27	1
94	2,227	202	461	668	611	252	32	1
95	2,308	194	499	687	596	296	36	0
96	2,279	198	494	624	630	294	39	0
97	2,251	192	424	673	588	312	62	0
98	2,328	206	449	650	622	340	59	2
99	2,241	152	450	614	651	316	57	1
00	2,249	171	445	604	600	353	76	0
Low Birth Weight Rate (per 100 Live Births)								
86	5.5	6.9	5.5	5.1	5.6	5.5	6.9	
87	5.5	6.0	5.8	5.1	5.3	6.5	5.6	
88	5.8	6.7	6.0	5.4	5.6	6.8	7.2	
89	5.9	7.4	5.7	5.8	5.4	6.5	8.9	
90	5.9	6.6	6.1	5.5	6.0	6.2	6.9	
91	5.8	6.9	5.7	5.3	6.0	5.9	6.6	
92	5.8	5.9	6.1	5.8	5.6	6.0	6.4	
93	5.7	7.1	5.8	5.2	5.4	6.4	6.1	
94	5.6	6.7	5.6	5.2	5.6	6.6	6.5	
95	6.0	6.4	6.2	5.6	5.5	7.6	7.5	
96	6.1	7.3	6.5	5.3	5.9	7.0	6.7	
97	6.2	7.5	5.8	5.8	5.9	7.4	9.2	
98	6.2	7.9	5.8	5.5	5.9	7.8	8.8	
99	5.9	5.8	5.7	5.3	6.3	6.9	7.4	
00	6.1	7.0	6.0	5.4	6.0	7.6	9.7	

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Note: Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A41 Low Birth Weight (<2500 grams) Births by Residence and Facility RHA, Alberta, 1986 - 2000

RHA	Year														
	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
Residence															
1	128	126	120	129	161	127	120	128	133	129	123	121	103	128	118
2	51	53	60	63	59	62	54	61	45	77	63	61	72	75	59
3	46	33	54	35	64	58	49	62	55	44	37	68	49	59	57
4	701	696	748	795	838	760	741	695	675	752	748	752	804	728	767
5	24	33	42	36	36	35	30	32	32	42	30	31	34	23	47
6	171	165	144	187	151	151	159	165	143	160	177	142	164	145	128
7	75	72	66	78	68	67	58	58	53	58	51	65	49	59	56
8	61	55	66	72	61	72	71	62	68	72	49	59	66	85	49
9	41	35	32	40	39	42	41	35	47	47	44	41	35	32	31
10	739	708	720	741	718	739	747	625	642	637	640	600	636	583	611
11	77	64	94	78	66	87	98	68	81	63	69	61	64	70	73
12	90	82	82	80	74	72	81	91	76	73	71	82	70	70	74
13	70	54	70	85	68	65	73	63	64	66	64	52	76	74	69
14	19	19	26	18	15	24	19	21	19	20	31	25	15	16	19
15	27	27	25	32	29	30	30	35	37	28	34	27	34	26	33
16	32	34	40	34	37	28	37	36	28	21	30	34	23	36	34
17	23	20	24	24	29	21	26	26	29	19	18	30	33	32	23
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Alberta	**2,375**	**2,276**	**2,413**	**2,527**	**2,513**	**2,440**	**2,434**	**2,263**	**2,227**	**2,308**	**2,279**	**2,251**	**2,328**	**2,241**	**2,249**
Facility															
1	126	118	105	122	151	120	105	106	129	118	112	105	101	118	106
2	43	34	54	44	37	45	41	53	35	66	44	50	52	53	41
3	16	12	12	11	21	16	10	14	12	11	8	17	10	11	7
4	774	783	846	877	954	866	844	817	776	864	847	875	917	855	921
5	9	13	7	14	15	12	7	13	5	7	7	6	5	4	6
6	132	128	129	152	117	120	126	117	121	119	136	106	121	114	96
7	29	38	24	28	24	26	27	26	21	19	18	18	13	14	12
8	15	17	17	23	15	21	19	17	17	9	6	9	11	14	8
9	16	20	13	17	13	19	13	15	16	18	23	21	14	16	20
10	1,053	966	1,032	1,072	1,014	1,015	1,075	942	927	920	946	909	954	897	877
11	27	10	25	26	21	31	21	15	23	17	11	10	7	13	19
12	35	34	30	29	26	29	35	31	38	33	27	26	26	20	25
13	41	30	44	40	40	49	46	35	42	62	41	38	48	48	58
14	13	14	19	14	7	18	11	14	17	13	14	13	4	10	9
15	10	20	9	17	16	13	11	8	13	5	9	10	7	9	7
16	25	30	32	28	26	25	27	27	22	17	20	23	18	32	24
17	11	9	15	13	16	15	16	13	13	10	12	15	20	13	13
Alberta	**2,375**	**2,276**	**2,413**	**2,527**	**2,513**	**2,440**	**2,434**	**2,263**	**2,227**	**2,308**	**2,279**	**2,251**	**2,328**	**2,241**	**2,249**

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Notes: RHA boundaries are current as of April, 2001.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A42 Low Birth Weight, Pre-term, High Birth Weight, and Multiple Births by Residence and Facility RHA, Alberta, 1998 - 2000 Combined

RHA	Total Live Births	Low Birth Weight		High Birth Weight		Preterm		Multiple Birth	
		Cases	%	Cases	%	Cases	%	Cases	%
Residence									
1	6,099	349	5.7	900	14.8	430	7.1	175	2.9
2	3,681	206	5.6	458	12.4	253	6.9	108	2.9
3	2,659	165	6.2	293	11.0	184	6.9	65	2.4
4	35,018	2,299	6.6	3,793	10.8	2,865	8.2	1,022	2.9
5	1,889	104	5.5	259	13.7	154	8.2	54	2.9
6	7,460	437	5.9	1,070	14.3	540	7.2	213	2.9
7	2,918	164	5.6	369	12.6	211	7.2	98	3.4
8	3,427	200	5.8	505	14.7	259	7.6	119	3.5
9	1,895	98	5.2	275	14.5	119	6.3	46	2.4
10	29,451	1,830	6.2	3,572	12.1	2,593	8.8	805	2.7
11	3,638	207	5.7	571	15.7	270	7.4	81	2.2
12	3,979	214	5.4	620	15.6	314	7.9	98	2.5
13	3,935	219	5.6	541	13.7	233	5.9	110	2.8
14	1,081	50	4.6	160	14.8	63	5.8	11	1.0
15	1,479	93	6.3	211	14.3	130	8.8	43	2.9
16	1,769	93	5.3	267	15.1	127	7.2	45	2.5
17	1,519	88	5.8	243	16.0	118	7.8	36	2.4
Unknown	14	2		2		1			
Alberta	**111,911**	**6,818**	**6.1**	**14,109**	**12.6**	**8,844**	**7.9**	**3,129**	**2.8**
Facility									
1	6,188	325	5.0	903	14.6	401	6.3	167	2.7
2	3,472	146	6.2	457	13.2	188	6.6	87	2.5
3	1,683	28	8.5	192	11.4	35	3.1	2	0.1
4	37,258	2,693	6.5	4,043	10.9	3,328	8.4	1,212	3.3
5	773	15	12.6	102	13.2	19	2.6	0	-
6	7,392	331	6.7	1,072	14.5	423	5.3	186	2.5
7	2,314	39	6.2	324	14.0	52	2.7	16	0.7
8	1,231	33	15.6	156	12.7	43	4.3	22	1.8
9	1,719	50	5.7	251	14.6	63	3.3	26	1.5
10	36,262	2,728	5.2	4,505	12.4	3,752	9.9	1,238	3.4
11	1,620	39	10.7	256	15.8	41	2.4	6	0.4
12	3,053	71	7.1	505	16.5	99	2.1	15	0.5
13	3,742	154	6.0	542	14.5	176	4.1	96	2.6
14	1,075	23	3.5	166	15.4	31	2.3	4	0.4
15	1,112	23	8.7	162	14.6	35	1.8	4	0.4
16	1,731	74	3.9	264	15.3	99	5.5	38	2.2
17	1,281	46	7.2	208	16.2	59	5.3	10	0.8
Unknown	5			1					
Alberta	**111,911**	**6,818**	**6.1**	**14,109**	**12.6**	**8,844**	**7.9**	**3,129**	**2.8**

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Note: RHA boundaries are current as of April 2001.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A43 Singleton Birth Small or Large for Gestational Age, High Birth Weight, and Mean Birth Weight, Alberta, 1986 - 2000

Year	Total Live Births	Live Singleton Births	Small for Gestational Age Live Singleton Births (SGA)	SGA rate (per 100 Live Singleton Births)	Large for Gestational Age Births (LGA)	LGA rate (per 100 Live Singleton Births)	High Birth Weight Birth (HBW; ≥4,000 grams)	HBW rate (per 100 total live births)	Mean Birth Weight for Live Singleton Term Birth (grams)	Mean Birth Weight for Low Birth Weight Live Birth (grams)
86	43,304	42,495	4,648	10.9	4,070	9.6	4,810	11.1	3,436	2,022
87	41,707	40,844	4,360	10.7	3,924	9.6	4,540	10.9	3,438	1,999
88	41,669	40,849	4,302	10.5	3,980	9.7	4,440	10.7	3,435	2,001
89	42,979	42,063	4,443	10.6	4,008	9.5	4,703	10.9	3,440	2,010
90	42,633	41,764	4,345	10.4	4,122	9.9	4,745	11.1	3,441	1,995
91	42,369	41,491	4,264	10.3	4,039	9.7	4,656	11.0	3,441	2,017
92	41,673	40,725	3,964	9.7	4,349	10.7	4,766	11.4	3,450	2,008
93	39,905	39,045	3,813	9.8	3,964	10.2	4,605	11.5	3,455	2,027
94	39,459	38,589	3,651	9.5	3,934	10.2	4,493	11.4	3,458	1,986
95	38,528	37,628	3,712	9.9	3,878	10.3	4,372	11.3	3,450	1,983
96	37,471	36,584	3,356	9.2	4,013	11.0	4,364	11.6	3,461	1,989
97	36,546	35,614	3,348	9.4	3,745	10.5	4,174	11.4	3,460	1,991
98	37,527	36,525	3,297	9.0	4,169	11.4	4,633	12.3	3,471	1,993
99	37,771	36,742	3,022	8.2	4,275	11.6	4,763	12.6	3,486	1,973
00	36,613	35,515	2,792	7.9	4,382	12.3	4,713	12.9	3,491	1,949

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release

Note: Data include Alberta residents only.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A44 Small for Gestational Age (SGA) and Large for Gestational Age (LGA) Rates for Singleton Births by Residence RHA, Alberta, 1998 - 2000 Combined

Residence RHA	Live SingletonBirths	SGA		LGA	
		Cases	Rate	Cases	Rate
Residence					
1	5,924	420	7.1	824	13.9
2	3,573	340	9.5	375	10.5
3	2,594	223	8.6	268	10.3
4	33,996	3,164	9.3	3,364	9.9
5	1,835	163	8.9	219	11.9
6	7,247	563	7.8	952	13.1
7	2,820	217	7.7	333	11.8
8	3,308	231	7.0	468	14.1
9	1,849	158	8.5	260	14.1
10	28,646	2,382	8.3	3,430	12.0
11	3,557	245	6.9	533	15.0
12	3,881	242	6.2	560	14.4
13	3,825	287	7.5	430	11.2
14	1,070	84	7.9	147	13.7
15	1,436	125	8.7	196	13.6
16	1,724	126	7.3	244	14.2
17	1,483	139	9.4	221	14.9
Unknown	14	2		2	
Alberta	**108,782**	**9,111**	**8.4**	**12,826**	**11.8**

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Note: RHA boundaries are current as of April, 2001.
Data include Alberta residents only.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A45 High Birth Weight (≥4,000 grams) Rate by Maternal Age Group, Alberta, 1986 - 2000

Year	Total	Maternal Age Group (Years)						
		<20	20-24	25-29	30-34	35-39	>39	Unknown
High Birth Weight Live Births								
86	4,810	277	1,142	1,862	1,194	302	33	0
87	4,540	287	1,009	1,777	1,116	311	40	0
88	4,440	257	967	1,687	1,159	329	41	0
89	4,703	298	917	1,771	1,315	369	33	0
90	4,745	302	959	1,694	1,330	401	59	0
91	4,656	347	940	1,581	1,290	440	58	0
92	4,766	340	945	1,612	1,353	459	57	0
93	4,605	315	919	1,504	1,365	439	63	0
94	4,493	310	844	1,480	1,342	462	55	0
95	4,372	280	807	1,448	1,305	472	60	0
96	4,364	255	821	1,401	1,306	503	78	0
97	4,174	249	764	1,353	1,227	507	74	0
98	4,633	274	8191,51	8	1,373554		93	2
99	4,763	236	9241,53	1	1,363599		110	0
00	4,713	247	8941,46	2	1,406602		100	0
High Birth Weight Rate (per 100 Live Births)								
86	11.1	8.8	10.0	11.1	12.6	13.3	15.1	
87	10.9	9.4	9.8	11.1	11.6	12.9	15.0	
88	10.7	8.5	9.9	10.6	11.6	12.6	11.8	
89	10.9	9.4	9.5	11.0	12.1	12.6	10.1	
90	11.1	9.2	10.3	10.9	12.2	12.4	16.3	
91	11.0	10.1	10.1	10.7	11.7	12.7	14.3	
92	11.4	10.4	10.6	11.4	11.9	12.9	13.4	
93	11.5	10.4	10.6	11.4	12.5	12.1	14.1	
94	11.4	10.2	10.3	11.5	12.2	12.1	11.2	
95	11.3	9.3	10.0	11.8	12.1	12.1	12.5	
96	11.6	9.4	10.9	11.8	12.3	12.1	13.4	
97	11.4	9.8	10.4	11.6	12.2	12.0	11.0	
98	12.3	10.5	10.6	13.0	13.1	12.8	13.9	
99	12.6	9.1	11.8	13.1	13.3	13.0	14.2	
00	12.9	10.2	12.0	13.0	14.0	13.0	12.8	

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Note: Data include Alberta residents only.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A46 High Birth Weight Births (≥4,000 grams) by Residence and Facility RHA, Alberta, 1986 - 2000

RHA	Year														
	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
Residence															
1	303	288	217	277	274	257	291	293	285	253	267	240	293	284	323
2	147	153	150	155	146	129	140	133	124	174	151	155	142	147	169
3	75	79	83	79	91	74	105	81	97	94	81	79	96	99	98
4	1,122	1,149	1,132	1,200	1,215	1,207	1,172	1,097	1,143	1,144	1,107	1,103	1,229	1,293	1,271
5	101	85	84	80	102	83	99	84	88	91	91	79	88	92	79
6	335	300	316	334	307	340	329	376	313	293	308	324	368	346	356
7	194	161	183	154	147	146	152	143	142	122	126	123	139	117	113
8	155	137	126	150	137	141	169	139	128	171	166	150	170	170	165
9	109	116	93	118	133	102	140	102	111	97	79	68	75	109	91
10	1,390	1,200	1,268	1,363	1,334	1,339	1,271	1,272	1,184	1,146	1,103	1,080	1,178	1,217	1,177
11	187	180	180	145	197	187	177	197	196	174	174	150	194	190	187
12	203	214	209	195	225	195	233	230	204	171	230	191	214	210	196
13	174	175	158	164	145	161	174	183	177	166	187	153	178	188	175
14	59	67	43	55	56	63	56	44	61	54	60	56	57	55	48
15	54	67	62	67	75	79	73	77	77	62	66	63	64	82	65
16	141	96	91	109	97	91	105	86	90	81	98	75	89	75	103
17	61	73	45	58	64	62	80	68	73	79	70	85	58	88	97
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
Alberta	**4,810**	**4,540**	**4,440**	**4,703**	**4,745**	**4,656**	**4,766**	**4,605**	**4,493**	**4,372**	**4,364**	**4,174**	**4,633**	**4,763**	**4,713**
Facility															
1	291	284	223	276	266	247	288	291	285	259	260	241	297	282	324
2	150	149	139	150	145	128	133	129	123	168	147	149	140	150	167
3	50	48	42	35	56	43	58	48	52	59	51	49	65	63	64
4	1,204	1,224	1,210	1,291	1,305	1,283	1,265	1,170	1,230	1,231	1,190	1,186	1,302	1,384	1,357
5	47	46	46	35	52	49	46	39	42	46	51	35	37	32	33
6	336	311	317	337	312	346	355	377	324	293	296	309	368	358	346
7	188	146	172	142	129	134	130	133	132	115	109	116	118	106	100
8	82	71	59	72	56	66	64	58	49	50	43	60	49	54	53
9	101	93	66	82	92	68	94	78	81	85	72	68	76	93	82
10	1,641	1,433	1,531	1,636	1,646	1,628	1,605	1,596	1,486	1,443	1,407	1,337	1,494	1,542	1,469
11	98	102	98	82	100	92	73	83	85	61	86	69	87	77	92
12	156	177	170	150	177	151	189	174	154	139	186	142	177	169	159
13	164	163	157	156	142	153	176	182	180	175	184	159	182	181	179
14	58	72	42	59	62	76	56	54	74	55	62	63	61	54	51
15	50	60	45	40	58	53	65	51	46	50	56	44	48	61	53
16	141	95	82	105	96	89	105	86	91	77	98	75	87	76	101
17	53	66	41	55	51	50	64	56	59	66	66	72	45	81	82
Unknown															1
Alberta	**4,810**	**4,540**	**4,440**	**4,703**	**4,745**	**4,656**	**4,766**	**4,605**	**4,493**	**4,372**	**4,364**	**4,174**	**4,633**	**4,763**	**4,713**

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Notes: RHA boundaries are current as of April, 2001.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A47 Pre-term (<37 Weeks Gestation) Births by LBW/non-LBW and Singleton/Multiple, Alberta, 1986 - 2000

Year	Total Preterm Births	Low Birth Weight Preterm Births[1]						Non-Low Birth Weight Preterm Births[1]					
		Singleton		Multiple		Total		Singleton		Multiple		Total	
		Cases	% of Preterm Births	Cases	% of Preterm Births	Cases	% of Preterm Births	Cases	% of Preterm Births	Cases	% of Preterm Births	Cases	% of Preterm Births
86	2,741	1,174	42.8	297	10.8	1,471	53.7	1,183	43.2	86	3.1	1,269	46.3
87	2,666	1,152	43.2	294	11.0	1,446	54.2	1,136	42.6	83	3.1	1,219	45.7
88	2,857	1,224	42.8	340	11.9	1,564	54.7	1,186	41.5	107	3.7	1,293	45.3
89	2,830	1,258	44.5	329	11.6	1,587	56.1	1,145	40.5	98	3.5	1,243	43.9
90	2,956	1,243	42.1	372	12.6	1,615	54.6	1,250	42.3	90	3.0	1,340	45.3
91	2,812	1,192	42.4	326	11.6	1,518	54.0	1,199	42.6	94	3.3	1,293	46.0
92	2,819	1,179	41.8	368	13.1	1,547	54.9	1,186	42.1	86	3.1	1,272	45.1
93	2,647	1,133	42.8	295	11.1	1,428	53.9	1,132	42.8	87	3.3	1,219	46.1
94	2,674	1,146	42.9	317	11.9	1,463	54.7	1,108	41.4	103	3.9	1,211	45.3
95	2,707	1,162	42.9	395	14.6	1,557	57.5	1,049	38.8	100	3.7	1,149	42.4
96	2,769	1,144	41.3	392	14.2	1,536	55.5	1,113	40.2	119	4.3	1,232	44.5
97	2,655	1,102	41.5	421	15.9	1,523	57.4	1,041	39.2	91	3.4	1,132	42.6
98	2,812	1,142	40.6	436	15.5	1,578	56.1	1,136	40.4	98	3.5	1,234	43.9
99	2,936	1,190	40.5	415	14.1	1,605	54.7	1,203	41.0	128	4.4	1,331	45.3
00	3,096	1,157	37.4	461	14.9	1,618	52.3	1,327	42.9	150	4.8	1,477	47.7

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Notes: 1. Preterm births with unknown gestation or unknown birth weight are excluded from these columns.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A48 Singleton and Multiple Pre-term Birth Rates, Alberta, 1986 - 2000

Year	Total Live Singleton Births	Live Singleton Pre-term Births	Singleton Pre-term Birth Rate[1]	Total live multiple births	Live Multiple Pre-term Births	Multiple Pre-term Birth Rate[2]
86	42,495	2,358	5.5	809	383	47.3
87	40,844	2,288	5.6	863	377	43.7
88	40,849	2,410	5.9	820	447	54.5
89	42,063	2,403	5.7	916	427	46.6
90	41,764	2,493	6.0	869	463	53.3
91	41,491	2,391	5.8	878	420	47.8
92	40,725	2,365	5.8	948	454	47.9
93	39,045	2,265	5.8	860	382	44.4
94	38,589	2,254	5.8	870	420	48.3
95	37,628	2,211	5.9	900	495	55.0
96	36,584	2,257	6.2	887	511	57.6
97	35,614	2,143	6.0	932	512	54.9
98	36,525	2,278	6.2	1,002	534	53.3
99	36,742	2,393	6.5	1,029	543	52.8
00	35,515	2,485	7.0	1,096	611	55.6

Source: Vital Statistics, Birth File, Department of Government Services, January 2002.

Notes:
1. Singleton pre-term birth rate is per 100 live singleton births.
2. Multiple pre-term birth rate is per 100 live multiple births.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A49 Pre-term (<37 weeks gestation) Live Births and Pre-term Live Birth Rate by Maternal Age Group, Alberta, 1986 - 2000

Year	Total	Maternal Age Group (Years)						
		<20	20-24	25-29	30-34	35-39	>39	Unknown
Live Births								
86	2,741	262	707	988	592	171	21	0
87	2,665	203	668	955	630	178	31	0
88	2,857	245	684	1,036	645	219	28	0
89	2,830	268	632	998	691	204	37	0
90	2,956	253	652	1,006	774	245	26	0
91	2,811	280	611	901	723	257	39	0
92	2,819	243	597	905	767	267	39	1
93	2,647	242	573	794	702	298	37	1
94	2,674	236	551	819	721	311	36	0
95	2,706	243	563	802	720	337	41	0
96	2,768	221	543	814	780	359	51	0
97	2,655	217	501	798	705	359	74	1
98	2,812	240	545	799	755	410	62	1
99	2,936	193	614	832	820	399	77	1
00	3,096	214	573	871	865	476	97	0
Pre-term Birth Rate (per 100 Live Births)								
86	6.3	8.3	6.2	5.9	6.2	7.5	9.6	
87	6.4	6.6	6.5	6.0	6.6	7.4	11.7	
88	6.9	8.1	7.0	6.5	6.5	8.4	8.1	
89	6.6	8.5	6.5	6.2	6.4	7.0	11.3	
90	6.9	7.7	7.0	6.5	7.1	7.6	7.2	
91	6.6	8.2	6.6	6.1	6.6	7.4	9.6	
92	6.8	7.4	6.7	6.4	6.7	7.5	9.2	
93	6.6	8.0	6.6	6.0	6.4	8.2	8.3	
94	6.8	7.8	6.7	6.3	6.6	8.2	7.3	
95	7.0	8.1	7.0	6.6	6.7	8.6	8.5	
96	7.4	8.1	7.2	6.9	7.4	8.6	8.8	
97	7.3	8.5	6.8	6.8	7.0	8.5	11.0	
98	7.5	9.2	7.1	6.8	7.2	9.5	9.3	
99	7.8	7.4	7.8	7.1	8.0	8.7	10.0	
00	8.5	8.8	7.7	7.7	8.6	10.3	12.4	

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Notes: Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A50 Pre-term (<37 weeks gestation) Live Births by Residence and Facility RHA, Alberta, 1986 - 2000

RHA	Year														
	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
Residence															
1	162	170	158	169	208	174	134	178	160	152	150	144	137	144	149
2	81	82	79	70	91	68	63	59	68	72	65	67	97	77	79
3	39	47	59	43	61	66	48	57	61	49	47	64	57	61	66
4	784	744	804	805	913	789	785	759	777	823	829	822	894	948	1013
5	23	57	55	31	45	43	40	36	44	44	40	37	44	43	67
6	171	161	157	192	181	165	179	191	156	177	208	166	167	188	185
7	73	83	87	101	65	95	65	74	72	88	69	64	68	68	75
8	76	61	79	84	68	72	92	55	85	82	65	85	81	92	86
9	51	31	49	52	54	69	52	37	53	59	39	51	43	36	40
10	894	873	890	867	877	893	947	820	811	770	836	762	832	842	909
11	87	81	105	106	89	107	104	67	95	68	94	88	84	96	90
12	101	96	114	100	106	89	95	97	87	100	95	93	79	114	121
13	73	54	76	77	75	57	79	68	64	82	80	72	75	90	68
14	23	25	33	24	16	29	27	24	21	27	29	23	23	19	21
15	27	25	24	36	41	37	44	39	49	46	48	35	48	35	47
16	43	47	52	39	37	30	35	44	39	37	39	44	39	42	46
17	33	28	36	34	29	28	30	42	32	30	35	38	43	41	34
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Alberta	**2,741**	**2,665**	**2,857**	**2,830**	**2,956**	**2,811**	**2,819**	**2,647**	**2,674**	**2,706**	**2,768**	**2,655**	**2,812**	**2,936**	**3,096**
Facility															
1	154	160	145	164	205	163	116	156	153	143	139	124	133	130	138
2	73	62	67	49	64	49	51	47	52	61	51	58	76	56	56
3	9	13	12	17	15	9	4	16	10	9	7	4	18	8	9
4	864	862	920	887	1,042	921	901	888	890	945	941	963	1020	1104	1204
5	5	22	12	6	15	13	7	7	12	6	8	7	7	7	5
6	129	116	140	154	131	139	146	139	134	137	171	126	129	150	144
7	27	42	36	34	25	46	20	21	34	25	24	13	22	11	19
8	20	16	20	12	11	12	15	9	20	12	9	11	17	12	14
9	22	13	17	12	16	35	19	9	15	23	17	21	19	19	25
10	1,267	1,181	1,285	1,326	1,253	1,235	1,345	1,190	1,173	1,122	1,202	1,166	1210	1250	1292
11	20	13	24	29	21	31	23	19	20	17	12	12	13	13	15
12	36	39	43	35	45	39	37	28	37	47	35	27	23	38	38
13	39	26	43	23	45	39	51	34	38	75	71	54	52	66	58
14	13	22	27	20	9	16	17	19	14	15	16	11	9	11	11
15	10	18	5	12	18	24	24	13	23	19	17	10	7	11	17
16	35	43	43	31	26	26	26	35	33	34	28	31	32	33	34
17	18	17	18	19	15	14	17	17	16	16	20	17	25	17	17
Alberta	**2,741**	**2,665**	**2,857**	**2,830**	**2,956**	**2,811**	**2,819**	**2,647**	**2,674**	**2,706**	**2,768**	**2,655**	**2,812**	**2,936**	**3,096**

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Notes: RHA boundaries are current as of April, 2001.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A51 Twin, Triplet and Quadruplet Live Births and Percent of Multiple Births, Alberta, 1986 - 2000

Year	Total	Twins	Triplets	Quadruplets	%Twins	%Triplets	%Quadruplets
86	809	789	20	0	97.5	2.5	0.0
87	863	850	13	0	98.5	1.5	0.0
88	820	794	18	8	96.8	2.2	1.0
89	916	897	19	0	97.9	2.1	0.0
90	869	842	27	0	96.9	3.1	0.0
91	878	867	11	0	98.7	1.3	0.0
92	948	909	39	0	95.9	4.1	0.0
93	860	833	23	4	96.9	2.7	0.5
94	870	849	21	0	97.6	2.4	0.0
95	900	875	25	0	97.2	2.8	0.0
96	887	861	26	0	97.1	2.9	0.0
97	932	875	57	0	93.9	6.1	0.0
98	1,002	965	34	3	96.3	3.4	0.3
99	1,029	997	32	0	96.9	3.1	0.0
00	1,098	1,053	45	0	95.9	4.1	0.0

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Note: Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A52 Live Multiple Births and Live Multiple Birth Rate by Maternal Age Group, Alberta, 1986 - 2000

Year	Total	Maternal Age Group (Years)						
		<20	20-24	25-29	30-34	35-39	>39	Unknown
Live Multiple Births[1]								
86	**809**	44	194	314	204	51	2	0
87	**863**	39	185	318	252	65	4	0
88	**820**	34	154	315	240	69	8	0
89	**916**	48	137	349	278	95	9	0
90	**869**	29	146	314	300	74	6	0
91	**878**	37	148	338	263	84	8	0
92	**948**	36	168	343	308	86	7	0
93	**860**	29	188	287	248	98	10	0
94	**870**	36	137	293	295	106	3	0
95	**900**	37	167	282	277	131	6	0
96	**887**	44	150	271	289	119	14	0
97	**932**	24	133	268	312	171	24	0
98	**1,002**	28	128	295	358	165	28	0
99	**1,029**	27	139	277	384	174	28	0
00	**1,098**	35	159	311	344	211	38	0
Live Multiple Birth Rate (per 100 Live Births)								
86	**1.9**	1.4	1.7	1.9	2.2	2.2		
87	**2.1**	1.3	1.8	2.0	2.6	2.7		
88	**2.0**	1.1	1.6	2.0	2.4	2.6		
89	**2.1**	1.5	1.4	2.2	2.6	3.2		
90	**2.0**	0.9	1.6	2.0	2.8	2.3		
91	**2.1**	1.1	1.6	2.3	2.4	2.4		
92	**2.3**	1.1	1.9	2.4	2.7	2.4		
93	**2.2**	1.0	2.2	2.2	2.3	2.7		
94	**2.2**	1.2	1.7	2.3	2.7	2.8		
95	**2.3**	1.2	2.1	2.3	2.6	3.3		
96	**2.4**	1.6	2.0	2.3	2.7	2.9		
97	**2.6**	0.9	1.8	2.3	3.1	4.0	3.6	
98	**2.7**	1.1	1.7	2.5	3.4	3.8	4.2	
99	**2.7**	1.0	1.8	2.4	3.7	3.8	3.6	
00	**3.0**	1.4	2.1	2.8	3.4	4.6	4.9	

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Notes: 1. Multiple birth refers to birth in which more than one infant is born.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A53 Singleton and Multiple Low Birth Weight Birth Rates, Alberta, 1986 - 2000

Year	Total Live Singleton Births	Live Singleton Low Birth Weight Births	Singleton Low Birth Weight Birth Rate[1]	Total Live Multiple Births	Live Multiple Low Birth Weight Births	Multiple Low Birth Weight Birth Rate[1]
86	42,495	1,968	4.6	809	407	50.3
87	40,844	1,880	4.6	863	396	45.9
88	40,849	1,986	4.9	820	427	52.1
89	42,063	2,051	4.9	916	476	52.0
90	41,764	2,055	4.9	869	458	52.7
91	41,491	1,995	4.8	878	445	50.7
92	40,725	1,946	4.8	948	488	51.5
93	39,045	1,866	4.8	860	397	46.2
94	38,589	1,796	4.7	870	431	49.5
95	37,628	1,829	4.9	900	479	53.2
96	36,584	1,794	4.9	887	485	54.7
97	35,614	1,737	4.9	932	514	55.2
98	36,525	1,793	4.9	1,002	535	53.4
99	36,742	1,731	4.7	1,029	510	49.6
00	35,515	1,684	4.7	1,096	565	51.5

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Notes:
1. Singleton low birth weight rate is per 100 live singleton births.
2. Multiple low birth weight rate is per 100 live multiple births.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A54 Multiple Live Births by Residence and Facility RHA, Alberta, 1986 - 2000

RHA	Year														
	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
Residence															
1	51	44	54	46	69	44	38	52	57	55	50	55	38	63	74
2	20	17	34	22	18	23	22	25	18	29	23	25	26	36	46
3	16	16	12	16	10	24	28	20	22	16	16	35	16	23	26
4	216	266	230	284	287	265	274	258	236	272	304	296	350	340	332
5	12	20	15	11	16	24	10	6	24	13	12	16	13	10	31
6	58	68	59	74	67	60	84	63	61	68	80	60	79	66	68
7	25	27	23	41	22	32	18	30	28	36	14	32	9	52	37
8	22	21	34	22	20	30	42	30	49	25	19	34	44	39	36
9	10	26	12	16	20	29	29	16	15	26	12	15	22	13	11
10	268	254	215	254	225	233	273	240	259	237	235	244	266	248	291
11	28	28	28	39	14	25	27	30	29	18	36	26	29	30	22
12	31	25	39	22	29	17	33	33	14	39	28	34	22	31	45
13	14	12	31	27	28	38	34	16	29	26	12	15	39	45	26
14	10	10	6	10	6	12	12	8	6	8	15	4	3	0	8
15	8	18	10	8	4	4	9	12	8	10	13	6	19	14	10
16	12	8	12	10	25	8	9	15	8	10	10	22	15	11	19
17	8	3	6	14	9	10	6	4	7	12	8	13	12	8	16
Alberta	**809**	**863**	**820**	**916**	**869**	**878**	**948**	**860**	**870**	**900**	**887**	**932**	**1,002**	**1,029**	**1,098**
Facility															
1	53	44	47	50	67	42	38	43	55	50	48	53	38	62	67
2	12	8	34	18	19	21	20	23	16	28	15	23	21	30	36
3	0	2	0	2	1	2	3	0	2	0	0	0	0	2	0
4	248	305	266	312	321	315	313	304	279	318	348	351	396	396	420
5	4	10	0	4	4	6	2	2	6	2	6	4	0	0	0
6	48	54	51	52	45	56	69	49	58	50	64	48	65	56	65
7	7	18	8	16	8	18	4	12	13	6	2	2	2	8	6
8	0	8	2	4	6	8	6	12	8	0	0	2	10	6	6
9	6	8	2	2	5	5	14	4	0	12	2	6	6	12	8
10	375	351	361	401	336	351	424	362	376	378	368	391	406	398	434
11	8	6	2	11	0	2	2	4	8	0	2	2	2	4	0
12	10	10	12	6	9	2	11	6	4	8	2	6	2	6	7
13	8	6	21	18	24	34	22	14	33	30	16	23	32	36	28
14	10	10	6	6	4	10	8	8	2	2	2	4	0	0	4
15	2	14	0	0	0	2	2	2	0	0	2	0	2	2	0
16	12	8	8	8	18	4	6	13	8	10	6	15	14	11	13
17	6	1	0	6	2	0	4	2	2	6	4	2	6	0	4
Alberta	**809**	**863**	**820**	**916**	**869**	**878**	**948**	**860**	**870**	**900**	**887**	**932**	**1,002**	**1,029**	**1,098**

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Note: RHA boundaries are current as of April, 2001.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A55 Multiple Pregnancies, Multiple Births and Perinatal Deaths of Multiple Births by Facility RHA and Hospitals, Alberta, 1999

Place of Birth	Total Mothers Delivered	Multiple Pregnancy Rate[1]	Multiple Pregnancies[2]			Babies[3]			Perinatal Deaths for Multiple Births	
			Twins	Triplets	Other	Twins	Triplets	Other	Cases[4]	Rate[5]
RHA Hospitals										
1	2,104	1.4	28	1	0	56	3	0	0	0.0
2	1,234	1.2	15	0	0	30	0	0	0	0.0
3	530	0.0	0	0	0	0	0	0	0	-
4	12,299	1.7	208	6	1	402	15	0	22	52.8
5	360	0.0	0	0	0	0	0	0	0	-
6	2,406	1.1	27	0	0	54	0	0	0	0.0
7	821	0.2	2	0	0	4	0	0	0	0.0
8	437	0.2	1	0	0	2	0	0	0	0.0
9	605	0.3	2	0	0	4	0	0	0	0.0
10	12,183	1.7	206	6	0	412	18	0	27	62.8
11	554	0.4	2	0	0	4	0	0	0	0.0
12	1,085	0.1	1	0	0	2	0	0	0	0.0
13	1,285	1.5	19	0	0	38	0	0	6	157.9
14	358	0.0	0	0	0	0	0	0	0	-
15	360	0.3	1	0	0	2	0	0	2	1,000.0
16	619	0.6	4	0	0	8	0	0	1	125.0
17	418	0.0	0	0	0	0	0	0	0	-
Out-of-Hospital*	376	0.0	0	0	0	0	0	0	0	-
Alberta	**38,034**	**1.4**	**516**	**13**	**1**	**1,018**	**36**	**0**	**58**	**55.0**

Sources: Statistics reported to the Reproductive Care Committee by Canadian Institute of Health Information Inpatient Files, Alberta Health and Wellness, and validated with the hospitals.

* Out-of-Hospital data from Vital Statistics, Birth File, Department of Government Services, January 2002 release

Notes:

1. Multiple Pregnancy Rate = Total Multiple Pregnancies / Total Mothers Delivered x 100.
2. Includes pregnancies with a fetal loss and retention of one or more fetus.
3. Excludes pregnancies with a fetal loss and retention of one or more fetus.
4. Excludes fetal death of one or more multiples prior to 20 weeks gestation.
5. Perinatal Death Rate (Multiple Births) = Number of Perinatal Deaths (Multiple Births) / Total Number of Multiple Births x 1,000.

RHA boundaries are current as of April, 2001.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A56 Multiple Pregnancies, Multiple Births and Perinatal Deaths of Multiple Births by Facility RHA and Hospitals, Alberta, 2000

Place of Birth	Total Mothers Delivered	Multiple Pregnancy Rate[1]	Multiple Pregnancies[2]			Babies[3]			Perinatal Deaths for Multiple Births	
			Twins	Triplets	Other	Twins	Triplets	Other	Cases[4]	Rate[5]
RHA Hospitals										
1	1,975	1.6	30	1	0	60	0	0	2	33.3
2	1,194	1.8	21	0	0	42	0	0	0	0.0
3	590	0.0	0	0	0	0	0	0	0	-
4	12,305	1.9	219	12	1	412	24	0	17	39.0
5	340	0.0	0	0	0	0	0	0	0	-
6	2,262	1.5	34	0	1	66	0	4	2	28.6
7	756	0.4	3	0	0	6	0	0	0	0.0
8	394	0.3	1	0	0	2	0	0	0	0.0
9	535	0.7	4	0	0	8	0	0	0	0.0
10	11,637	1.6	176	8	0	340	24	0	20	54.9
11	500	0.0	0	0	0	0	0	0	0	-
12	949	0.3	3	0	0	6	0	0	0	0.0
13	1,220	1.2	15	0	0	30	0	0	0	0.0
14	325	0.3	1	0	0	2	0	0	0	0.0
15	354	0.0	0	0	0	0	0	0	0	-
16	626	0.5	3	0	0	2	0	0	0	0.0
17	430	0.0	0	0	0	0	0	0	0	-
Out-of-Hospital*	353	0.0	0	0	0	0	0	0	0	-
Alberta	**36,745**	**1.5**	**510**	**21**	**2**	**976**	**48**	**4**	**41**	**39.9**

Sources: Statistics reported to the Reproductive Care Committee by Canadian Institute of Health Information Inpatient Files, Alberta Health and Wellness, and validated with the hospitals.

* Out-of-Hospital data from Health Surveillance, Alberta Health and Wellness.

Notes:

1. Multiple Pregnancy Rate = Total Multiple Pregnancies / Total Mothers Delivered x 100.
2. Includes pregnancies with a fetal loss and retention of one or more fetus.
3. Excludes pregnancies with a fetal loss and retention of one or more fetus.
4. Excludes fetal death of one or more multiples prior to 20 weeks gestation.
5. Perinatal Death Rate (Multiple Births) = Number of Perinatal Deaths (Multiple Births) / Total Number of Multiple Births x 1,000.

RHA boundaries are current as of April, 2001.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A57 Multiple Pregnancies, Multiple Births and Perinatal Deaths of Multiple Births, Alberta, 1982 - 2000

Year	Total Mothers Delivered	Multiple Pregnancies (MP)				Multiple Births (MB)			Perinatal Deaths of Multiple Births[1]	
		Twins	Triplets	Quads	MP Rate	Total Births	Total MB[2]	MB Rate	Cases	Rate
82	44,601	432	11	2	1.0	45,300	905	2.0	52	57.5
83	45,023	419	5	0	0.9	45,770	853	1.9	41	48.1
84	43,546	416	3	0	1.0	44,235	841	1.9	49	58.3
85	43,425	429	5	0	1.0	43,945	873	2.0	40	45.8
86	43,495	407	7	0	1.0	43,853	835	1.9	49	58.7
87	41,861	448	4	0	1.1	42,356	908	2.1	48	52.9
88	42,040	401	6	2	1.0	42,459	828	2.0	53	64.0
89	42,819	463	7	0	1.1	43,293	947	2.2	49	51.7
90	42,949	446	9	0	1.1	43,398	919	2.1	66	71.8
91	42,581	464	6	0	1.1	43,092	946	2.2	46	48.6
92	41,693	474	16	0	1.2	42,203	996	2.4	52	52.2
93	40,075	442	11	1	1.1	40,531	921	2.3	48	52.1
94	39,723	456	8	0	1.2	40,190	936	2.3	44	47.0
95	38,359	459	10	0	1.2	38,837	948	2.4	56	59.1
96	37,524	456	10	0	1.2	37,911	942	2.5	47	49.9
97	36,514	464	28	0	1.3	36,885	1,012	2.7	44	43.5
98	37,608	495	16	2	1.4	37,936	1,046	2.8	30	28.7
99	38,034	516	13	1	1.4	38,579	1,054	2.7	58	55.0
00	36,745	510	21	2	1.5	37,384	1,028	2.7	41	39.9

Source: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals.

Notes:

1. Perinatal Death Rate of Multiple Births = Perinatal Deaths of Multiple Births / Total Number of Mutiple Births x 1,000.
2. Total MB includes births in which there was a fetal death of another fetus prior to 20 weeks gestation.
3. This is a correction of the December 2000 Pregnancy Outcomes report, in which 46 perinatal deaths were reported for multiple births in 1997.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A58 Number and Rate (per 1,000 Total Births) of Selected Congenital Anomalies, Alberta, 1986 - 2000

Year	Total Births[1]	All Anomalies[2]		Neural Tube Defects[4]		Heart Septal[5]		Down Syndrome[6]	
		Cases	Rate[3]	Cases	Rate[3]	Cases	Rate[3]	Cases	Rate[3]
86	43,583	1,906	43.7	49	1.12	235	5.39	38	0.87
87	41,966	1,813	43.2	33	0.79	252	6.00	41	0.98
88	41,976	2,005	47.8	41	0.98	289	6.88	39	0.93
89	43,239	2,032	47.0	37	0.86	239	5.53	45	1.04
90	42,927	2,084	48.5	31	0.72	281	6.55	53	1.23
91	42,675	1,863	43.7	35	0.82	245	5.74	53	1.24
92	41,945	1,847	44.0	36	0.86	229	5.46	37	0.88
93	40,172	1,518	37.8	30	0.75	215	5.35	45	1.12
94	39,722	1,490	37.5	30	0.76	184	4.63	44	1.11
95	38,788	1,275	32.9	42	1.08	167	4.31	50	1.29
96	37,712	1,194	31.7	23	0.61	181	4.80	32	0.85
97	36,800	1,187	32.3	39	1.06	166	4.51	56	1.52
98	37,860	1,255	33.1	30	0.79	166	4.38	72	1.90
99	38,074	1,186	31.1	25	0.66	146	3.83	60	1.58
00	37,411	1,284	34.3	19	0.51	159	4.25	54	1.44

Source: Alberta Congenital Anomalies Surveillance System, 1980-2000, February 2002 release.

Notes:
1. Total Births = Live Births + Stillbirths
2. Includes all congenital anomalies in and outside ICD-9 Chapter XIV. The number of patients was counted; one patient could belong to more than one diagnostic category of defects.
3. Per 1,000 total births in each age group.
4. ICD-9 diagnostic codes 740.0-742.0.
5. ICD-9 diagnostic codes 745.0-745.9.
6. ICD-9 diagnostic code 758.0.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A59 Selected Congenital Anomalies and Rates (per 1,000 Live Births) by Maternal Age Group, Alberta, 1985 - 2000 Combined

Maternal Age Group (Years)	Live Births	All Anomalies[1]		Neural Tube Defects[3]		Heart Septal[4]		Down Syndrome[5]	
		Cases	Rate[2]	Cases	Rate[2]	Cases	Rate[2]	Cases	Rate[2]
< 20	47,607	1,800	37.8	32	0.67	255	5.36	25	0.53
20-24	143,827	5,157	35.9	94	0.65	668	4.64	82	0.57
25-29	222,821	8,375	37.6	124	0.56	1,054	4.73	158	0.71
30-34	166,165	6,428	38.7	99	0.60	815	4.90	211	1.27
35-39	55,948	2,334	41.7	27	0.48	348	6.22	148	2.65
≥40	7,534	363	48.2	2	0.27	57	7.57	57	7.57
Unknown	21	3				1			
Total	643,923	24,460	38.0	378	0.59	3,198	4.97	681	1.06

Source: Alberta Congenital Anomalies Surveillance System, 1980-2000, February 2002 release.

Notes:

2. Includes all congenital anomalies in and outside ICD-9 Chapter XIV. The number of patients was counted; one patient could belong to more than one diagnostic category of defects.

2. Per 1,000 live births in each age group.

3. ICD-9 diagnostic codes 740.0-742.0.

4. ICD-9 diagnostic codes 745.0-745.9.

5. ICD-9 diagnostic code 758.0.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A60 Selected Congenital Anomalies and Rates (per 1,000 Live Births) by Birth Weight Group, Alberta, 1985 - 2000 Combined

Birth Weight (grams)	Live Births	All Anomalies[1]		Neural Tube Defects[3]		Heart Septal[4]		Down Syndrome[5]	
		Cases	Rate[2]	Cases	Rate[2]	Cases	Rate[2]	Cases	Rate[2]
< 1000	2,775	490	176.6	25	9.01	55	19.82	19	6.85
1000-1499	3,242	610	188.2	23	7.09	86	26.53	13	4.01
1500-2499	31,620	2,585	81.8	81	2.56	489	15.46	151	4.78
2500-4499	595,310	20,380	34.2	244	0.41	2,508	4.21	497	0.83
≥4500	10,960	391	35.7	5	0.46	58	5.29	1	0.09
Unknown	16	4				2			
Total	**643,923**	**24,460**	**38.0**	**378**	**0.59**	**3,198**	**4.97**	**681**	**1.06**

Source: Alberta Congenital Anomalies Surveillance System, 1980-2000, February 2002 release.

Notes:

2. Includes all congenital anomalies in and outside ICD-9 Chapter XIV. The number of patients was counted; one patient could belong to more than one diagnostic category of defects.

2. Per 1,000 live births in each age group.

3. ICD-9 diagnostic codes 740.0-742.0

4. ICD-9 diagnostic codes 745.0-745.9

5. ICD-9 diagnostic code 758.0.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A61 Stillbirths and Stillbirth Rates by Maternal Age Group, Alberta, 1986 - 2000

Year	Total	Age Group (Years)						
		15-19	20-24	25-29	30-34	35-39	>39	Unknown
Stillbirths								
86	266	24	71	88	64	15	4	0
87	253	36	59	75	61	22	0	0
88	296	35	67	114	61	17	2	0
89	254	20	46	96	64	25	3	0
90	296	24	76	87	73	31	5	0
91	309	26	86	85	78	29	5	0
92	278	28	70	80	63	34	3	0
93	267	26	56	79	70	33	3	0
94	266	24	54	68	77	35	8	0
95	262	27	46	77	72	34	6	0
96	236	21	41	70	60	38	6	0
97	249	16	51	77	56	45	4	0
98	189	20	32	53	53	25	6	0
99	259	19	50	78	64	37	11	0
00	238	20	44	67	67	29	11	0
Stillbirths (per 1,000 Total Births)								
86	6.1	7.6	6.2	5.2	6.7	6.6		
87	6.0	11.7	5.7	4.7	6.3	9.0		
88	7.1	11.5	6.8	7.1	6.1	6.4		
89	5.9	6.4	4.7	5.9	5.9	8.5		
90	6.9	7.3	8.1	5.6	6.7	9.5		
91	7.2	7.6	9.2	5.7	7.0	8.3		
92	6.6	8.6	7.8	5.6	5.5	9.5		
93	6.7	8.7	6.4	5.9	6.3	9.0		
94	6.7	7.9	6.5	5.2	7.0	9.1		
95	6.8	9.0	5.7	6.3	6.6	8.6		
96	6.3	7.8	5.4	5.9	5.6	9.0		
97	6.8	6.3	6.9	6.5	5.5	10.5		
98	5.0	7.7	4.1	4.5	5.0	5.7		
99	6.8	7.3	6.3	6.6	6.2	8.0		
00	6.5	8.2	5.9	5.9	6.6	6.2		

Sources: Vital Statistics, Birth File, Department of Government Services, January 2002 rel
Vital Statistics, Stillbirth File, Department of Government Services, January 2002

Notes: Data include Alberta residents only.
Data may differ from previously published data due to differences in definitions a
dates of data extraction.

Table A62 Stillbirths by Birth Weight Categories, Alberta, 1986 - 2000

Year	Birth Weight (Grams)					
	<500	<1000	<1500	<2500	≥4000	≥4500
Stillbirths						
86	53	101	127	185	6	2
87	51	98	122	180	6	2
88	73	150	177	217	3	1
89	56	115	137	181	2	1
90	68	136	166	219	4	0
91	101	156	188	240	4	0
92	75	119	150	208	3	1
93	68	121	145	186	8	1
94	61	120	140	188	3	1
95	85	131	151	201	6	4
96	69	116	134	173	7	3
97	72	133	153	191	6	3
98	74	104	115	143	7	2
99	89	135	156	193	6	3
00	74	132	145	169	11	5
Percentage of Stillbirths						
86	19.9	37.8	47.6	69.3	2.2	0.7
87	20.2	38.7	48.2	71.1	2.4	0.8
88	24.6	50.5	59.6	73.1	1.0	0.3
89	22.0	45.3	53.9	71.3	0.8	0.4
90	23.0	45.9	56.1	74.0	1.4	0.0
91	32.6	50.3	60.6	77.4	1.3	0.0
92	26.9	42.7	53.8	74.6	1.1	0.4
93	25.5	45.3	54.3	69.7	3.0	0.4
94	22.9	45.1	52.6	70.7	1.1	0.4
95	32.4	50.0	57.6	76.7	2.3	1.5
96	29.2	49.2	56.8	73.3	3.0	1.3
97	28.9	53.4	61.4	76.7	2.4	1.2
98	39.2	55.0	60.8	75.7	3.7	1.1
99	34.4	52.1	60.2	74.5	2.3	1.2
00	31.1	55.5	60.9	71.0	4.6	2.1
Rate (per 100 Total Births in Each Weight Category)						
86	100.0	39.1	26.7	7.2	0.1	0.3
87	100.0	38.9	25.4	7.3	0.1	0.3
88	100.0	49.5	31.6	8.3	0.1	0.2
89	100.0	37.5	25.6	6.7	0.0	0.1
90	61.8	43.3	29.9	8.0	0.1	0.0
91	78.9	49.7	34.0	9.0	0.1	0.0
92	72.1	40.3	28.2	7.9	0.1	0.1
93	68.0	44.5	31.6	7.6	0.2	0.1
94	59.8	40.3	27.8	7.8	0.1	0.2
95	65.9	40.9	28.9	8.0	0.1	0.6
96	66.3	38.7	25.7	7.1	0.2	0.4
97	67.9	45.5	29.4	7.8	0.1	0.5
98	72.5	38.8	23.9	5.8	0.2	0.3
99	74.2	42.3	29.4	7.9	0.1	0.4
00	61.2	38.3	25.5	7.0	0.2	0.6

Sources: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Vital Statistics, Stillbirth File, Department of Government Services, January 2002 release.

Note: Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A63a Stillbirths by Birth Weight Distribution and Time of Death, Alberta, 1999

Birth Weight (grams)	Antepartum Deaths				Intrapartum Deaths				Stillbirths[2]	Live Births[3]	Ratio[4]
	Prior to Hospital Admission	In Hospital	Total	Total Corrected[1]	Prior to Hospital Admission	In Hospital	Total	Total Corrected[1]			
<500	45	1	46	39	2	53	55	26	101	31	3,258
500 - 749	17	4	21	16	0	11	11	7	32	68	471
750 - 999	9	1	10	10	1	1	2	1	12	85	141
1000 - 1249	16	0	16	13	0	1	1	0	17	85	200
1250 - 1499	7	1	8	7	0	1	1	0	9	106	85
1500 - 1749	11	0	11	11	0	1	1	0	12	179	67
1750 - 1999	6	1	7	6	0	0	0	0	7	259	27
2000 - 2499	15	2	17	12	1	1	2	2	19	1,428	13
2500 - 3999	56	0	56	54	1	8	9	6	65	30,756	2
≥4000	6	0	6	6	0	1	1	0	7	4,762	1
Total	188	11	198	174	5	78	83	42	281	37,759	7

Source: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals.

Notes:
1. Major anomalies excluded.
2. Total Antepartum Deaths + Total Intrapartum Deaths (excludes two still births with no specified weight).
3. Live births for each weight category from Alberta Health (1999) Vital Statistics Annual Review (excludes two live births with no specified weight).
4. Ratio: Stillbirths/Live births = (Total Antepartum Deaths + Total Intrapartum Deaths)/Live births x 1,000.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A63b Stillbirths by Birth Weight Distribution and Time of Death, Alberta, 2000

Birth Weight (grams)	Antepartum Deaths				Intrapartum Deaths				Stillbirths[2]	Live Births[3]	Ratio[4]
	Prior to Hospital Admission	In Hospital	Total	Total Corrected[1]	Prior to Hospital Admission	In Hospital	Total	Total Corrected[1]			
<500	38	1	39	32	0	37	37	19	76	47	1,617
500 - 749	16	4	20	15	3	18	21	13	41	74	554
750 - 999	9	2	11	9	0	7	7	3	18	92	196
1000 - 1249	5	0	5	3	0	2	2	0	7	89	79
1250 - 1499	3	1	4	2	0	2	2	0	6	121	50
1500 - 1749	6	0	6	5	0	0	0	0	6	160	38
1750 - 1999	7	0	7	6	0	0	0	0	7	291	24
2000 - 2499	11	0	11	11	0	1	1	0	12	1,375	9
2500 - 3999	47	2	49	45	0	8	8	6	57	29,646	2
≥4000	8	0	8	8	0	6	6	6	14	4,710	3
Total	150	10	160	136	3	81	84	47	244	36,605	7

Source: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals.

Notes:
1. Major anomalies excluded.
2. Total Antepartum Deaths + Total Intrapartum Deaths (excludes four still births with no specified weight).
3. Live births for each weight category from Alberta Health (2000) Vital Statistics Annual Review (excludes one live birth with no specified weight).
4. Ratio: Stillbirths/Live births = (Total Antepartum Deaths + Total Intrapartum Deaths)/Live births x 1,000.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A64 Stillbirths by weeks of gestation, Alberta, 1986 - 2000

Year	Stillbirths	Number of weeks gestation							
		<37		37-42		>42		Unknown	
		Cases	% of stillbirths	Cases	% of stillbirths	Cases	% of stillbirths	Cases	% of stillbirths
86	267	178	66.7	85	31.8	3	1.1	1	0.4
87	253	171	67.6	81	32.0	1	0.4	0	0.0
88	297	210	70.7	86	29.0	0	0.0	1	0.3
89	254	182	71.7	72	28.3	0	0.0	0	0.0
90	296	222	75.0	74	25.0	0	0.0	0	0.0
91	310	234	75.5	75	24.2	1	0.3	0	0.0
92	279	205	73.5	72	25.8	0	0.0	2	0.7
93	267	175	65.5	91	34.1	0	0.0	1	0.4
94	266	189	71.1	77	28.9	0	0.0	0	0.0
95	262	200	76.3	61	23.3	1	0.4	0	0.0
96	236	172	72.9	64	27.1	0	0.0	0	0.0
97	249	189	75.9	60	24.1	0	0.0	0	0.0
98	192	144	75.0	45	23.4	0	0.0	0	0.0
99	260	191	73.5	69	26.5	0	0.0	0	0.0
00	238	179	75.2	59	24.8	0	0.0	0	0.0

Sources: Vital Statistics, Stillbirth File, Department of Government Services, January 2002 release.

Note: Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A65 Multiple and Singleton Stillbirth Rates, Alberta, 1986 - 2000

Year	Multiple Births[1]				Singleton Births			
	Live Births	Stillbirths	Total Births	Stillbirth Rate[2]	Live births	Stillbirths	Total Births	Stillbirth Rate[2]
86	809	19	828	22.9	42,495	248	42,743	5.8
87	863	21	884	23.8	40,844	232	41,076	5.6
88	820	30	850	35.3	40,849	267	41,116	6.5
89	916	16	932	17.2	42,063	238	42,301	5.6
90	869	26	895	29.1	41,764	270	42,034	6.4
91	878	24	902	26.6	41,491	286	41,777	6.8
92	948	19	967	19.6	40,725	260	40,985	6.3
93	860	27	887	30.4	39,045	240	39,285	6.1
94	870	16	886	18.1	38,589	250	38,839	6.4
95	900	25	925	27.0	37,628	237	37,865	6.3
96	887	20	907	22.1	36,584	216	36,800	5.9
97	932	19	951	20.0	35,614	230	35,844	6.4
98	1,002	12	1,014	11.8	36,525	177	36,702	4.8
99	1,029	24	1,053	22.8	36,742	235	36,977	6.4
00	1,098	20	1,118	17.9	35,515	218	35,733	6.1

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.
Vital Statistics, Stillbirth File, Department of Government Services, January 2002 release.

Notes:
1. Multiple birth refers to birth in which more than one infant is born.
2. Stillbirth rates are per 1,000 total births.
Data include Alberta residents only.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A66 Weight Specific Perinatal and Neonatal Mortality, Alberta, 1999

Birth Weight (Grams)	Perinatal					Neonatal				
	Total Births[1]	Perinatal Deaths[2]	Perinatal Deaths Excluding Major Congenital Anomalies	Perinatal Mortality Rate[3]	Corrected Perinatal Mortality Rate[4]	Live Births	Neonatal Deaths	Neonatal Deaths Excluding Major Congenital Anomalies	Neonatal Mortality Rate[5]	Corrected Neonatal Mortality Rate[6]
<500	122	*132	93	1000.0	1000.0	31	31	28	1000	1000.0
500 - 749	104	61	40	586.5	481.9	68	33	21	485.3	375.0
750 - 999	97	28	20	288.7	224.7	85	18	11	211.8	141.0
1000 - 1249	98	23	14	234.7	157.3	85	7	2	82.4	25.0
1250 - 1499	114	11	6	96.5	55.0	106	2	0	18.9	0.0
1500 - 1749	190	15	13	78.9	69.1	179	4	3	22.3	16.9
1750 - 1999	266	12	6	45.1	23.1	259	5	0	19.3	0.0
2000 - 2499	1,441	26	16	18.0	11.2	1,428	8	2	5.6	1.4
2500 - 2999	5,607	40	30	7.1	5.4	5,574	17	6	3.0	1.1
3000 - 3999	25,218	51	41	2.0	1.6	25,182	25	11	1.0	0.4
4000 - 4499	4,001	6	6	1.5	1.5	3,997	2	2	0.5	0.5
≥4,500	768	4	2	5.2	2.6	765	1	0	1.3	0.0
Total	**38,026**	**409**	**287**	**10.8**	**7.6**	**37,759**	**153**	**86**	**4.1**	**2.3**

Source: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals.
Vital Statistics Annual Review 1999, Alberta Vital Statistics.

Notes:

1. Figures obtained from Vital Statistics Annual Review 1999.
2. Excludes two deaths with no recorded weight.
3. ((Stillbirths + Early Neonatal Deaths) / Total Births) x 1000.
4. (((Stillbirths + Early Neonatal Deaths) - Congenital Anomalies) / (Total Births - Congenital Anomalies)) x 1000.
5. ((Early Neonatal Deaths + Late Neonatal Deaths) / Live Births) x 1000.
6. ((Early Neonatal Deaths + Late Neonatal Deaths - Congenital Anomalies) / (Live Births - Congenital Anomalies)) x 1000.

*Perinatal Deaths total more than Total Births in this category due to the fact that some live births and stillbirths are inconsistently registered. Total birth numbers are from the Vital Statistics database, in which some births < 500 grams are apparently not registered. The perinatal deaths come from the Medical Records departments, which have the death records for these unregistered births. The rates have consequently been adjusted downward to 1,000 to correct for this fact.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A67 Weight Specific Perinatal and Neonatal Mortality, Alberta, 2000

Birth Weight (Grams)	Perinatal					Neonatal				
	Total Births[1]	Perinatal Deaths[2]	Perinatal Deaths Excluding Major Congenital Anomalies	Perinatal Mortality Rate[3]	Corrected Perinatal Mortality Rate[4]	Live Births	Neonatal Deaths	Neonatal Deaths Excluding Major Congenital Anomalies	Neonatal Mortality Rate[5]	Corrected Neonatal Mortality Rate[6]
<500	120	*122	80	1000.0	1000.0	48	48	31	1000	1000.0
500 - 749	117	77	55	658.1	578.9	74	40	31	540.5	476.9
750 - 999	107	23	17	215.0	168.3	92	11	9	119.6	100.0
1000 - 1249	95	11	6	115.8	66.7	89	6	5	67.4	56.8
1250 - 1499	127	11	3	86.6	25.2	121	5	1	41.3	8.5
1500 - 1749	164	9	5	54.9	31.3	160	3	0	18.8	0.0
1750 - 1999	298	15	7	50.3	24.1	291	8	1	27.5	3.5
2000 - 2499	1,385	16	11	11.6	8.0	1,375	8	0	5.8	0.0
2500 - 2999	5,396	36	27	6.7	5.0	5,366	11	3	2.0	0.6
3000 - 3999	24,310	41	30	1.7	1.2	24,280	17	6	0.7	0.2
4000 - 4499	3,937	9	9	2.3	2.3	3,931	2	1	0.5	0.3
≥4,500	784	8	8	10.2	10.2	779	2	2	2.6	2.6
Total	**36,840**	**378**	**258**	**10.3**	**7.0**	**36,606**	**161**	**90**	**4.4**	**2.5**

Source: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals.
Vital Statistics Annual Review 2000, Alberta Vital Statistics.

Notes:

1. Figures obtained from Vital Statistics Annual Review 2000; one live birth with no recorded weight is excluded.
2. Excludes four deaths with no recorded weight.
3. ((Stillbirths + Early Neonatal Deaths) / Total Births) x 1000.
4. (((Stillbirths + Early Neonatal Deaths) - Congenital Anomalies) / (Total Births - Congenital Anomalies)) x 1000
5. ((Early Neonatal Deaths + Late Neonatal Deaths) / Live Births) x 1000.
6. ((Early Neonatal Deaths + Late Neonatal Deaths - Congenital Anomalies) / (Live Births - Congenital Anomalies)) x 1000.

*Perinatal Deaths total more than Total Births in this category due to the fact that some live births and stillbirths are inconsistently registered. Total birth numbers are from the Vital Statistics database, in which some births < 500 grams are apparently not registered. The perinatal deaths come from the Medical Records departments, which have the death records for these unregistered births. The rates have consequently been adjusted downward to 1,000 to correct for this fact.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A68 Weight Specific Perinatal and Neonatal Mortality, Alberta, 1996 - 2000 Combined

Birth Weight (Grams)	Perinatal					Neonatal				
	Total Births	Perinatal Deaths	Perinatal Deaths Excluding Major Congenital Anomalies	Perinatal Mortality Rate[1]	Corrected Perinatal Mortality Rate[2]	Live Births[3]	Neonatal Deaths	Neonatal Deaths Excluding Major Congenital Anomalies	Neonatal Mortality Rate[4]	Corrected Neonatal Mortality Rate[5]
<500	527	*577	429	1000.0	1000.0	183	176	138	961.7	951.7
500 - 749	541	340	255	628.5	559.2	348	177	145	508.6	458.9
750 - 999	488	106	75	217.2	164.1	426	61	44	143.2	107.6
1000 - 1249	537	92	52	171.3	104.6	486	43	20	88.5	43.2
1250 - 1499	625	50	26	80.0	43.3	592	18	4	30.4	6.9
1500 - 1749	907	60	42	66.2	47.2	867	17	5	19.6	5.8
1750 - 1999	1,451	70	37	48.2	26.1	1,410	31	5	22.0	3.6
2000 - 2499	7,431	120	78	16.1	10.6	7,358	42	8	5.7	1.1
2500 - 2999	28,475	146	113	5.1	4.0	28,346	48	19	1.7	0.7
3000 - 3999	125,181	230	178	1.8	1.4	124,995	110	53	0.9	0.4
4000 - 4499	19,329	33	33	1.7	1.7	19,307	14	10	0.7	0.5
>=4500	3,566	21	18	5.9	5.1	3,550	4	3	1.1	0.8
Total	**189,058**	**1,845**	**1,336**	**9.8**	**7.1**	**187,868**	**741**	**454**	**3.9**	**2.4**

Sources: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals.
Vital Statistics Annual Review 1996 - 2000, Alberta Vital Statistics.

Notes:

1. ((Perinatal Deaths) / Total Births) x 1000.
2. ((Perinatal Deaths - Congenital Anomalies) / (Total Births - Congenital Anomalies)) x 1000.
3. Figures obtained from Vital Statistics Annual Review 1996 - 2000; data on births <500 grams from AMA hospital database.
4. ((Early Neonatal Death + Late Neonatal Deaths) / Live Births) x 1000.
5. ((Early Neonatal Deaths + Late Neonatal Deaths - Congenital Anomalies) / (Live Births - Congenital Anomalies)) x 1000.

*Perinatal Deaths total more than Total Births in this category due to the fact that some live births and stillbirths are inconsistently registered. Total birth numbers are from the Vital Statistics database, in which some births < 500 grams are apparently not registered. The perinatal deaths come from the Medical Records departments, which have the death records for these unregistered births. The rates have consequently been adjusted downward to 1,000 to correct for this fact.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A69 Perinatal and Neonatal Mortality Rates by Length of Gestation, Alberta, 1999

Gestational Age (Weeks)	Live Births[1]	% of Total Deaths[2]	Stillbirths	Early Neonatal Deaths	Late Neonatal Deaths	Perinatal Mortality Rate (per 1,000 total births)[3,4]	Neonatal Mortality Rate (per 1,000 live births)[4]
<24	51	22.7	99	*49	*3	986.7	1000.0
24	23	2.8	5	5	2	357.1	304.3
25	21	3.7	9	6	1	500.0	333.3
26	40	4.1	10	7	1	340.0	200.0
27	42	2.3	7	3	0	204.1	71.4
28	65	4.6	9	11	0	270.3	169.2
29	38	1.1	4	1	0	119.0	26.3
30	78	2.5	8	3	0	127.9	38.5
31	94	2.5	5	5	1	101.0	63.8
32	138	2.5	9	1	1	68.0	14.5
33	228	2.8	11	1	0	50.2	4.4
34	410	3.0	10	3	0	31.0	7.3
35	570	3.2	12	2	0	24.1	3.5
36	1,134	3.7	9	5	2	12.2	6.2
37	2,252	6.4	21	5	2	11.4	3.1
38	5,540	8.0	27	4	4	5.6	1.4
39	8,788	4.8	11	6	4	1.9	1.1
40	11,706	5.0	13	5	4	1.5	0.8
41	5,913	1.1	2	3	0	0.8	0.5
42	603	1.1	2	3	0	8.3	5.0
>42	21	0.0	0	0	0	0.0	0.0
Total	**37,755**	**100.0**	**283**	**128**	**25**	**10.8**	**4.1**

Sources: Vital Statistics Annual Review 1999, Alberta Vital Statistics.

Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals.

Notes:

1. Gestational age was not specified for 4 live births.
2. Total number of deaths = 436.
3. Total Births = Live births + Stillbirths.
4. Perinatal and neonatal mortality rates are not corrected.

*Neonatal Deaths total more than Live Births in this category due to the fact that some live births and neonatal deaths are inconsistently registered. Live birth numbers are from the Vital Statistics database, in which some births < 24 weeks gestation are apparently not registered. The neonatal deaths come from the Medical Records departments, which have the death records for these unregistered births. The rates have consequently been adjusted downward to 1,000 to correct for this fact.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A70 Perinatal and Neonatal Mortality Rates by Length of Gestation, Alberta, 2000

Gestational Age (Weeks)	Live Births[1]	% of Total Deaths[2]	Stillbirths	Early Neonatal Deaths	Late Neonatal Deaths	Perinatal Mortality Rate (per 1,000 total births)[3,4]	Neonatal Mortality Rate (per 1,000 live births)[4]
<24	81	37.7	81	69	4	925.9	901.2
24	18	6.1	15	9	1	727.3	555.6
25	27	4.6	9	6	4	416.7	370.4
26	30	2.7	8	2	1	263.2	100.0
27	57	2.7	7	4	0	171.9	70.2
28	41	1.7	4	1	2	111.1	73.2
29	57	1.5	5	1	0	96.8	17.5
30	93	2.4	8	1	1	89.1	21.5
31	91	1.7	6	1	0	72.2	11.0
32	157	2.0	2	5	1	44.0	38.2
33	189	2.0	6	2	0	41.0	10.6
34	421	2.2	7	2	0	21.0	4.8
35	600	2.9	8	1	3	14.8	6.7
36	1,235	6.1	20	4	1	19.1	4.0
37	2,346	4.6	14	4	1	7.6	2.1
38	5,631	4.6	12	5	2	3.0	1.2
39	8,359	5.9	13	8	3	2.5	1.3
40	11,046	5.4	13	7	2	1.8	0.8
41	5,564	2.9	10	1	1	2.0	0.4
42	532	0.2	0	1	0	1.9	1.9
>42	29	0.0	0	0	0	0.0	0.0
Total	36,604	100.0	248	134	27	10.4	4.4

Sources: Vital Statistics Annual Review 2000, Alberta Vital Statistics.
Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals.

Notes:
1. Gestational age was not specified for 2 live births.
2. Total number of deaths = 409.
3. Total Births = Live births + Stillbirths.
4. Perinatal and neonatal mortality rates are not corrected.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A71 Perinatal and Neonatal Mortality Rates by Length of Gestation, Alberta, 1996 - 2000 Combined

Gestational Age (Weeks)	Live Births*	% of Total Deaths[1]	Stillbirths	Early Neonatal Deaths	Late Neonatal Deaths	Perinatal Mortality Rate (per 1,000 total births)[2,3]	Neonatal Mortality Rate (per 1,000 live births)[3]
<24	199	21.2	426	**263	**14	1000.0	1000.0
24	100	5.4	57	46	6	656.1	520.0
25	135	4.2	41	32	11	414.8	318.5
26	165	2.9	28	25	6	274.6	187.9
27	203	3.0	38	19	4	236.5	113.3
28	221	2.0	22	17	2	160.5	86.0
29	289	1.9	29	7	2	113.2	31.1
30	382	2.6	41	10	2	120.6	31.4
31	454	2.3	31	13	2	90.7	33.0
32	714	2.0	30	9	2	52.4	15.4
33	1,066	2.1	35	7	1	38.1	7.5
34	1,815	2.9	41	14	4	29.6	9.9
35	2,783	2.7	39	11	4	17.7	5.4
36	5,775	4.1	61	17	4	13.4	3.6
37	11,286	6.6	64	58	11	10.7	6.1
38	27,449	6.2	85	25	14	4.0	1.4
39	43,655	5.3	63	29	15	2.1	1.0
40	58,579	5.6	65	36	11	1.7	0.8
41	28,130	2.3	28	15	4	1.5	0.7
42	3,186	0.6	7	5	1	3.8	1.9
>42	108	0.0	0	0	0	0.0	0.0
Total	186,694	100.0	1,231	658	120	10.1	4.2

Sources: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals.

*Vital Statistics Annual Review 1996-2000, Alberta Vital Statistics - excluding live births <24 weeks.

Notes:

1. Total number of deaths = 2009.
2. Total Births = Live births + Stillbirths.
3. Perinatal and neonatal mortality rates are not corrected.

Table A72a Perinatal and Neonatal Mortality Rates by Maternal Age Group, Alberta, 1999

Maternal Age Group	Live Births*	% of Total Births[1]	Stillbirths	Early Neonatal Deaths	Late Neonatal Deaths	Perinatal Mortality Rate (PMR)[2]	PMR Corrected for Congenital Anomalies	Neonatal Mortality Rate (NMR[3]	NMR Corrected for Congenital Anomalies	Mortality Rate[4]	Mortality Rate Corrected for Congenital Anomalies
≤17	861	2.3	7	2	0	10.4	6.9	2.3	0.0	10.4	6.9
18-29	21,237	56.2	152	66	14	10.2	7.9	3.8	2.5	10.8	8.3
30-39	14,887	39.4	113	57	11	11.3	7.2	4.6	2.2	12.1	7.6
≥35	5,382	14.3	52	24	6	14.0	8.5	5.6	2.8	15.1	9.3
≥39	772	2.0	11	2	0	16.6	6.5	2.6	0.0	16.6	6.5

Sources: *Number of live births for maternal age from Vital Statistics Annual Review, 1999; 2 births have no recorded maternal age.

Still Births and neonatal deaths as reported to Committee on Reproductive Care by Medical Records Departments of the hospitals.

Notes:

1. Total Births = Live Births + Stillbirths (= 38,040 across all age groups).
2. Per 1,000 total births in each age group.
3. Per 1,000 live births in each age group.
4. ((Stillbirths + Neonatal Deaths) / Total Births in each age Group) x 1,000.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A72b Perinatal and Neonatal Mortality Rates by Maternal Age Group, Alberta, 2000

Maternal Age Group	Live Births*	% of Total Births[1]	Stillbirths	Early Neonatal Deaths	Late Neonatal Deaths	Perinatal Mortality Rate (PMR)[2]	PMR Corrected for Congenital Anomalies	Neonatal Mortality Rate (NMR[3]	NMR Corrected for Congenital Anomalies	Mortality Rate[4]	Mortality Rate Corrected for Congenital Anomalies
≤17	760	2.0	6	2	1	10.4	6.6	3.9	3.9	11.7	7.9
18-29	20,437	54.1	132	66	19	9.6	6.8	4.2	4.2	10.5	7.2
30-39	14,637	38.8	99	58	7	10.7	7.0	4.4	4.4	11.1	7.4
≥35	5,385	14.3	41	26	3	12.3	8.3	5.4	5.4	12.9	8.7
≥39	777	2.1	10	8	0	22.9	17.9	10.3	10.3	22.9	17.9

Sources: *Number of live births for maternal age from Vital Statistics Annual Review, 2000; 2 births have no recorded maternal age.

Still Births and neonatal deaths as reported to Committee on Reproductive Care by Medical Records Departments of the hospitals.

Notes:

1. Total Births = Live Births + Stillbirths (= 36,858 across all age groups).
2. Per 1,000 total births in each age group.
3. Per 1,000 live births in each age group.
4. ((Stillbirths + Neonatal Deaths) / Total Births in each age Group) x 1,000.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A73 Perinatal and Neonatal Statistics by Facility RHA, Alberta, 1999

Facility RHA	Total Births ≥500g[1]	Stillbirth Rate ≥500g[2]	Perinatal Mortality Rate ≥500g[3]	Neonatal Mortality Rate ≥500g[4]	Total Cesarean Section Rate[5]	Primary Cesarean Section Rate[6]	Extremely Low Birth Weight %[7]	Very Low Birth Weight %[8]	Low Birth Weight %[9]
1	2,128	4.7	6.6	1.9	18.6	11.1	0.2	0.7	5.6
2	1,245	4.8	6.4	1.6	13.0	9.2	0.4	0.6	5.2
3	530	3.8	3.8	0.0	17.0	10.4	0.2	0.2	1.9
4	12,460	3.9	7.1	4.0	20.4	14.4	0.7	1.4	7.0
5	360	8.3	8.3	0.0	18.1	10.3	0.0	0.0	1.4
6	2,452	3.3	4.9	1.6	20.4	13.5	0.2	0.4	4.8
7	824	4.9	4.9	1.2	21.0	15.1	0.0	0.0	1.7
8	438	4.6	4.6	0.0	12.8	9.6	0.0	0.0	2.5
9	606	5.0	6.6	1.7	7.1	3.0	0.0	0.5	3.2
10	12,349	5.6	9.0	4.5	19.6	12.8	0.7	1.5	7.5
11	554	3.6	3.6	0.0	13.9	9.9	0.0	0.0	2.0
12	1,084	4.6	4.6	0.0	17.9	11.5	0.1	0.1	2.1
13	1,301	8.5	10.0	1.6	18.8	11.5	0.2	0.5	4.0
14	357	0.0	0.0	0.0	21.2	14.0	0.0	0.0	2.8
15	357	5.6	5.6	0.0	13.6	9.2	0.6	0.8	2.8
16	622	0.0	1.6	1.6	20.5	12.1	0.6	1.0	5.3
17	416	2.4	2.4	0.0	10.8	7.9	0.5	0.5	2.9
Alberta	**38,083**	**4.6**	**7.1**	**3.2**	**19.1**	**12.7**	**0.5**	**1.1**	**6.0**

Source: Statistics reported to the Reproductive Care Committee from Canadian Institute of Health Information, Alberta Health and Wellness.

Notes:

1. Out-of-hospital births excluded.
2. (Stillbirths ≥500g / Total Births ≥500g) x 1000.
3. ((Stillbirths ≥500g + Early Neonatal Deaths ≥500g) / Total Births ≥500g) x 1000.
4. ((Early + Late Neonatal Deaths ≥500g) / Live Births ≥500g) x 1000.
5. (Total Cesarean Sections / Total Mothers Delivered) x 100.
6. (Primary Cesarean Sections / Total Mothers Delivered) x 100.
7. (Live Births < 1000g / All Live Births) x 100.
8. (Live Births < 1500g / All Live Births) x 100.
9. (Live Births < 2500g / All Live Births) x 100.

RHA boundaries are current as of 2001.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A74 Perinatal and Neonatal Statistics by Facility RHA, Alberta, 2000

Facility RHA	Total Births ≥500g[1]	Stillbirth Rate ≥500g[2]	Perinatal Mortality Rate ≥500g[3]	Neonatal Mortality Rate ≥500g[4]	Total Cesarean Section Rate[5]	Primary Cesarean Section Rate[6]	Extremely Low Birth Weight %[7]	Very Low Birth Weight %[8]	Low Birth Weight %[9]
1	2,015	3.5	3.5	0.5	19.3	13.1	0.1	0.5	5.6
2	1,211	5.8	7.4	1.7	16.0	12.1	0.1	0.6	4.4
3	590	3.4	3.4	0.0	18.3	14.1	0.0	0.5	1.4
4	12,493	4.2	6.4	2.8	20.7	14.1	0.7	1.4	7.5
5	338	3.0	3.0	3.0	17.9	11.2	0.6	2.1	1.8
6	2,298	5.2	7.8	2.6	24.5	15.4	0.3	0.7	4.3
7	759	0.0	0.0	1.3	21.7	13.0	0.0	1.1	1.7
8	396	2.5	5.1	2.5	15.5	11.2	0.0	2.0	2.5
9	540	3.7	3.7	0.0	5.6	2.6	0.0	1.7	3.7
10	11,834	4.8	8.2	4.4	21.0	14.1	1.0	1.9	7.8
11	499	4.0	8.0	6.0	14.2	10.4	0.6	3.2	4.0
12	953	3.1	4.2	1.1	21.2	15.5	0.0	1.7	2.8
13	1,228	3.3	4.1	1.6	19.2	11.3	0.0	1.2	4.6
14	327	9.2	9.2	0.0	21.5	12.6	0.0	4.3	3.1
15	355	5.6	11.3	5.7	13.3	8.5	0.0	4.2	1.7
16	636	4.7	4.7	0.0	22.0	15.0	0.0	2.5	3.8
17	431	9.3	18.6	9.4	12.1	7.9	0.7	4.9	3.0
Alberta	**36,903**	**4.4**	**6.7**	**3.0**	**20.2**	**13.6**	**0.6**	**1.2**	**6.3**

Source: Statistics reported to the Reproductive Care Committee from Canadian Institute of Health Information, Alberta Health and Wellness.

Notes:

1. Out-of-hospital births excluded.
2. (Stillbirths ≥500g / Total Births ≥500g) x 1000.
3. ((Stillbirths ≥500g + Early Neonatal Deaths ≥500g) / Total Births ≥500g) x 1000.
4. ((Early + Late Neonatal Deaths ≥500g) / Live Births ≥500g) x 1000.
5. (Total Cesarean Sections / Total Mothers Delivered) x 100.
6. (Primary Cesarean Sections / Total Mothers Delivered) x 100.
7. (Live Births < 1000g / All Live Births) x 100.
8. (Live Births < 1500g / All Live Births) x 100.
9. (Live Births < 2500g / All Live Births) x 100.

RHA boundaries are current as of 2001.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A75 Perinatal and Corrected (for Major Anomalies) Perinatal Mortality Rates by Facility RHA, Alberta, 1999

Place of Birth	Total Births[1]	Total Births		Stillbirths				Early Neonatal Deaths				Perinatal Mortality Rate[2,3]		Corrected Perinatal Mortality Rate[4,5]	
						Major Anomalies				Major Anomalies					
		≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g
RHA Hospitals															
1	2,134	2,128	2,123	10	8	2	2	4	2	0	0	6.6	4.7	5.6	3.8
2	1,249	1,245	1,241	6	6	0	0	2	2	0	0	6.4	6.4	6.4	6.4
3	530	530	530	2	2	0	0	0	0	0	0	3.8	3.8	3.8	3.8
4	12,521	12,460	12,361	49	33	10	6	39	18	21	10	7.1	4.1	4.6	2.8
5	360	360	360	3	3	0	0	0	0	0	0	8.3	8.3	8.3	8.3
6	2,433	2,452	2,449	8	7	1	1	4	2	1	1	4.9	3.7	4.1	2.9
7	824	824	824	4	4	0	0	0	0	0	0	4.9	4.9	4.9	4.9
8	438	438	438	2	2	0	0	0	0	0	0	4.6	4.6	4.6	4.6
9	607	606	606	3	3	0	0	1	1	1	1	6.6	6.6	5.0	5.0
10	12,401	12,349	12,269	69	49	15	9	42	25	28	20	9.0	6.0	5.5	3.7
11	556	554	553	2	1	1	1	0	0	0	0	3.6	1.8	1.8	0.0
12	1,086	1,084	1,081	5	3	0	0	0	0	0	0	4.6	2.8	4.6	2.8
13	1,304	1,301	1,298	11	10	0	0	2	1	1	1	10.0	8.5	9.2	7.7
14	358	357	357	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
15	361	357	357	2	2	0	0	0	0	0	0	5.6	5.6	5.6	5.6
16	623	622	619	0	0	0	0	1	0	0	0	1.6	0.0	1.6	0.0
17	418	416	416	1	1	0	0	0	0	0	0	2.4	2.4	2.4	2.4
Total Hospital Births	**38,203**	**38,083**	**37,882**	**177**	**134**	**29**	**19**	**95**	**51**	**52**	**33**	**7.1**	**4.9**	**5.0**	**3.5**
Out-of-Hospital Births*	376	375	374	3	2	3	0	2	1	1	1	13.3	8.0	2.7	5.4
Alberta	38,579	38,458	38,256	180	136	32	19	97	52	53	34	7.2	4.9	5.0	3.5

Sources: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals and Canadian Institute of Health Information.
Alberta Health and Wellness.
*Out-of-hospital data from Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Notes:
1. Weights were not recorded for 2 stillbirths.
2. (Stillbirths≥500g + Early Neonatal Deaths≥500g) / Total Births ≥500g X 1000.
3. (Stillbirths≥1000g + Early Neonatal Deaths≥1000g) / Total Births ≥1000g X 1000.
4. (Stillbirths≥500g Corrected + Early Neonatal Deaths≥500g Corrected) / Total Births ≥500g Corrected X 1000.
5. (Stillbirths≥1000g Corrected + Early Neonatal Deaths≥1000g Corrected) / Total Births ≥1000g Corrected X 1000.

Corrected rates exclude deaths due to major anomalies.
RHA boundaries are current as of 2001.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A76 Perinatal and Corrected (for Major Anomalies) Perinatal Mortality Rates by Facility RHA, Alberta, 2000

Place of Birth	Total Births[1]	Total Births		Stillbirths				Early Neonatal Deaths				Perinatal Mortality Rate[2,3]		Corrected Perinatal Mortality Rate[4,5]	
						Major Anomalies				Major Anomalies					
		≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g
RHA Hospitals															
1	2,018	2,015	2,005	7	5	1	0	0	0	0	0	3.5	2.5	3.0	2.5
2	1,213	1,211	1,204	7	6	0	0	2	2	1	1	7.4	6.6	6.6	5.8
3	590	590	588	2	2	0	0	0	0	0	0	3.4	3.4	3.4	3.4
4	12,545	12,493	12,364	53	31	19	7	27	13	11	9	6.4	3.6	4.0	2.3
5	339	338	336	1	1	0	0	0	0	0	0	3.0	3.0	3.0	3.0
6	2,304	2,298	2,282	12	7	0	0	6	3	2	2	7.8	4.4	7.0	3.5
7	759	759	759	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
8	397	396	395	1	1	0	0	1	1	0	0	5.1	5.1	5.1	5.1
9	540	540	538	2	2	0	0	0	0	0	0	3.7	3.7	3.7	3.7
10	11,893	11,834	11,688	57	37	11	7	40	19	22	15	8.2	4.8	5.4	2.9
11	501	499	495	2	2	0	0	2	1	1	1	8.0	6.1	6.0	4.0
12	953	953	950	3	1	0	0	1	1	0	0	4.2	2.1	4.2	2.1
13	1,229	1,228	1,224	4	4	0	0	1	0	0	0	4.1	3.3	4.1	3.3
14	327	327	324	3	2	3	2	0	0	0	0	9.2	6.2	0.0	0.0
15	355	355	353	2	1	1	1	2	2	2	2	11.3	8.5	2.8	0.0
16	636	636	633	3	2	0	0	0	0	0	0	4.7	3.2	4.7	3.2
17	431	431	424	4	3	1	0	4	4	3	3	18.6	16.5	9.4	9.5
Total Hospital Births	**37,030**	**36,903**	**36,562**	**163**	**107**	**36**	**17**	**86**	**46**	**42**	**33**	**6.7**	**4.2**	**4.6**	**2.8**
Out-of-Hospital Births*	353	352	350	5	2	0	0	2	1	0	0	19.9	8.6	19.9	8.6
Alberta	**37,383**	**37,255**	**36,912**	**168**	**109**	**36**	**17**	**88**	**47**	**42**	**33**	**6.9**	**4.2**	**4.8**	**2.9**

Sources: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals and Canadian Institute of Health Information. Alberta Hea and Wellness.

*Out-of-hospital data from Vital Statistics, Birth File, Department of Government Services, January 2002 release

Notes:

1. Weights were not recorded for 3 hospital births and 1 out-of-hospital birth.
2. (Stillbirths≥500g + Early Neonatal Deaths≥500g) / Total Births ≥500g X 1000.
3. (Stillbirths≥1000g + Early Neonatal Deaths≥1000g) / Total Births ≥1000g X 1000.
4. (Stillbirths≥500g Corrected + Early Neonatal Deaths≥500g Corrected) / Total Births ≥500g Corrected X 1000.
5. (Stillbirths≥1000g Corrected + Early Neonatal Deaths≥1000g Corrected) / Total Births ≥1000g Corrected X 1000.

Corrected rates exclude deaths due to major anomalies.

RHA boundaries are current as of 2001.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A77 Perinatal and Neonatal Mortality Rates by Level of Hospital, Alberta, 1999

Hospitals	Total Births ≥500g[1]	Stillbirth Rate ≥500g[2]	Perinatal Mortality Rate ≥500g[3]	Neonatal Mortality Rate ≥500g[4]	Total Cesarean Section Rate[5]	Primary Cesarean Section Rate[6]	Extremely Low Birth Weight %[7]	Very Low Birth Weight %[8]	Low Birth Weight %[9]
Level III									
Royal Alexandra/University of Alberta	4,496	9.8	17.6	9.4	23.0	15.5	1.7	3.9	14.3
Foothills	4,429	5.0	12.0	8.8	19.2	14.1	2.0	3.5	10.8
LEVEL III TOTAL	**8,925**	**7.4**	**14.8**	**9.1**	**21.1**	**14.8**	**1.8**	**3.7**	**12.5**
Level II									
Misericordia	2,649	1.9	2.6	1.5	16.8	10.5	0.1	0.2	4.0
Grey Nuns	3,594	5.0	5.8	1.7	19.8	12.9	0.1	0.1	4.4
Lougheed	3,812	3.9	5.2	1.3	19.9	13.2	0.1	0.4	5.9
Rockyview	4,219	2.8	3.6	1.4	22.2	15.7	0.0	0.1	4.1
Red Deer	1,772	4.5	6.8	2.3	23.7	15.9	0.2	0.4	5.8
Grande Prairie	1,120	9.8	11.6	1.8	21.8	13.4	0.2	0.6	4.4
Lethbridge Reg.	1,626	5.5	7.4	1.9	19.7	12.2	0.2	0.9	6.4
Medicine Hat	908	3.3	4.4	1.1	12.8	9.0	0.6	0.8	6.6
LEVEL II TOTAL	**19,700**	**4.1**	**5.3**	**1.6**	**20.1**	**13.3**	**0.1**	**0.3**	**5.0**
Level I									
North	7,487	2.8	3.3	0.8	15.2	9.8	0.1	0.2	2.4
South	1,971	4.6	5.6	1.0	14.7	8.8	0.2	0.2	1.9
LEVEL I TOTAL	**9,458**	**3.2**	**3.8**	**0.8**	**15.1**	**9.6**	**0.1**	**0.2**	**2.3**
TOTAL	**38,083**	**4.6**	**7.1**	**3.2**	**19.1**	**12.7**	**0.5**	**1.1**	**6.0**

Source: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals.

Notes:
1. Out-of-hospital births excluded.
2. (Stillbirths ≥500g / Total Births ≥500g) x 1000.
3. ((Stillbirths ≥500g + Early Neonatal Deaths ≥500g) / Total Births ≥500g) x 1000.
4. ((Early + Late Neonatal Deaths ≥500g) / Live Births ≥500g) x 1000.
5. (Total Cesarean Sections / Total Mothers Delivered) x 100.
6. (Primary Cesarean Sections / Total Mothers Delivered) x 100.
7. (Live Births < 1000g / All Live Births) x 100.
8. (Live Births < 1500g / All Live Births) x 100.
9. (Live Births < 2500g / All Live Births) x 100.

RHA boundaries are current as of 2001.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A78 Perinatal and Neonatal Mortality Rates by Level of Hospital, Alberta, 2000

Hospitals	Total Births ≥500g[1]	Stillbirth Rate ≥500g[2]	Perinatal Mortality Rate ≥500g[3]	Neonatal Mortality Rate ≥500g[4]	Total Cesarean Section Rate[5]	Primary Cesarean Section Rate[6]	Extremely Low Birth Weight %[7]	Very Low Birth Weight %[8]	Low Birth Weight %[9]
Level III									
Royal Alexandra/University of Alberta	4,124	6.8	14.8	10.3	24.4	17.0	2.8	5.1	15.0
Foothills	4,264	7.3	11.3	5.9	19.8	14.0	1.9	3.4	11.4
LEVEL III TOTAL	**8,388**	**7.0**	**13.0**	**8.0**	**22.1**	**15.5**	**2.3**	**4.3**	**13.2**
Level II									
Misericordia	2,690	4.1	4.8	0.7	18.2	11.6	0.1	0.1	3.7
Grey Nuns	3,606	3.9	5.3	2.2	20.9	14.1	0.1	0.2	4.8
Lougheed	4,070	2.7	4.4	1.7	20.1	13.4	0.1	0.4	6.6
Rockyview	4,159	2.6	3.4	0.7	22.3	15.0	0.1	0.2	4.5
Red Deer	1,730	5.8	9.2	3.5	28.3	18.2	0.3	0.4	5.1
Grande Prairie	1,065	3.8	4.7	1.9	22.2	13.1	0.0	0.2	5.0
Lethbridge Reg.	1,610	3.7	3.7	0.6	20.5	13.4	0.2	0.6	6.6
Medicine Hat	916	4.4	5.5	1.1	15.6	11.3	0.1	0.4	5.5
LEVEL II TOTAL	**19,846**	**3.6**	**4.8**	**1.5**	**21.1**	**13.9**	**0.1**	**0.3**	**5.2**
Level I									
North	6,856	3.6	5.1	1.6	16.3	10.5	0.1	0.2	2.6
South	1,814	4.4	5.0	1.1	17.0	12.5	0.1	0.2	1.4
LEVEL I TOTAL	**8,669**	**3.8**	**5.1**	**1.5**	**16.5**	**11.0**	**0.1**	**0.2**	**2.4**
TOTAL	**36,903**	**4.4**	**6.7**	**3.0**	**20.2**	**13.6**	**0.6**	**1.2**	**6.3**

Source: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals.

Notes:
1. Out-of-hospital births excluded.
2. (Stillbirths ≥500g / Total Births ≥500g) x 1000.
3. ((Stillbirths ≥500g + Early Neonatal Deaths ≥500g) / Total Births ≥500g) x 1000.
4. ((Early + Late Neonatal Deaths ≥500g) / Live Births ≥500g) x 1000.
5. (Total Cesarean Sections / Total Mothers Delivered) x 100.
6. (Primary Cesarean Sections / Total Mothers Delivered) x 100.
7. (Live Births < 100.0g / All Live Births) x 100.
8. (Live Births < 1500g / All Live Births) x 100.
9. (Live Births < 2500g / All Live Births) x 100.

RHA boundaries are current as of 2001.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A79 Neonatal, Post-neonatal and Infant Mortality Rates, Alberta, 1986 - 2000

Year	Neonatal Deaths[1]	Post-Neonatal Deaths[2]	Infant Deaths[3]	Neonatal Mortality Rate (per 1,000 Live Births)	Post-Neonatal Mortality Rate (per 1,000 Live Births)	Infant Mortality Rate (per 1,000 Live Births)
86	214	172	386	4.9	4.0	8.9
87	179	132	311	4.3	3.2	7.5
88	183	157	340	4.4	3.8	8.2
89	180	139	319	4.2	3.2	7.4
90	215	123	338	5.0	2.9	7.9
91	145	138	283	3.4	3.3	6.7
92	194	105	299	4.7	2.5	7.2
93	157	105	262	3.9	2.6	6.6
94	185	105	290	4.7	2.7	7.3
95	187	80	267	4.9	2.1	6.9
96	150	81	231	4.0	2.2	6.2
97	128	51	179	3.5	1.4	4.9
98	129	74	203	3.4	2.0	5.4
99	141	77	218	3.7	2.0	5.8
00	149	89	238	4.1	2.4	6.5

Sources: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Vital Statistics, Death File, Department of Government Services, May 2001 release.

Notes:

1. Neonatal deaths refers to deaths of live born infants less than 28 full days after birth.
2. Post-neonatal deaths refers to deaths of children between 28 full days and one year of age.
3. Infant deaths refers to deaths of children under one year of age.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A80 Neonatal and Corrected (for Major Anomalies) Neonatal Mortality Rates by Facility RHA, Alberta, 1999

Place of Birth	Live Births	Live Births		Early Neonatal Deaths				Late Neonatal Deaths				Neonatal Mortality Rate[1,2]		Corrected Neonatal Mortality Rate[3,4]	
						Major Anomalies				Major Anomalies					
		≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g
RHA Hospitals															
1	2,120	2,118	2,115	4	2	0	0	0	0	0	0	1.9	0.9	1.9	0.9
2	1,240	1,239	1,235	2	2	0	0	0	0	0	0	1.6	1.6	1.6	1.6
3	528	528	528	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
4	12,424	12,411	12,328	39	18	21	10	11	6	3	3	4.0	1.9	2.1	0.9
5	357	357	357	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
6	2,421	2,444	2,442	4	2	1	1	0	0	0	0	1.6	0.8	1.2	0.4
7	820	820	820	0	0	0	0	0	0	0	0	1.2	1.2	1.2	1.2
8	436	436	436	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
9	603	603	603	1	1	1	1	0	0	0	0	1.7	1.7	0.0	0.0
10	12,300	12,280	12,220	42	25	28	20	13	12	8	8	4.5	3.0	1.6	0.7
11	552	552	552	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
12	1,079	1,079	1,078	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
13	1,290	1,290	1,288	2	1	1	1	0	0	0	0	1.6	0.8	0.8	0.0
14	357	357	357	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
15	357	355	355	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
16	623	622	619	1	0	0	0	0	0	0	0	1.6	0.0	1.6	0.0
17	417	415	415	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
TOTAL HOSPITAL BIRTH	37,924	37,906	37,748	95	51	52	33	25	19	11	11	3.2	1.9	1.5	0.7
OUT-OF-HOSPITAL BIRTH	376	375	374	2	1	1	1	0	0	0	0	5.3	2.7	2.7	0.0
PROVINCIAL TOTAL	38,300[5]	38,281	38,122	97	52	53	34	25	19	11	11	3.2	1.9	1.5	0.7

Sources: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals.

*Out-of-hospital data from Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Notes:

1. (Early Neonatal Deaths≥500g + Late Neonatal Deaths≥500g) / Live Births ≥500g X 1000.
2. (Early Neonatal Deaths≥1000g + Late Neonatal Deaths≥1000g) / Live Births ≥1000g X 1000.
3. (Early Neonatal Deaths≥500g Corrected + Late Neonatal Deaths≥500g Corrected) / Live Births ≥500g Corrected X 1000.
4. (Early Neonatal Deaths≥1000g Corrected + Late Neonatal Deaths≥1000g Corrected) / Live Births ≥1000g Corrected X 1000.
5. Vital Statistics Alberta reported 38,314 live births in Alberta in 1999 (37,759 of these to Alberta residents).

Corrected rates exclude deaths due to major anomalies.

RHA boundaries are current as of 2001.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A81 Neonatal and Corrected (for Major Anomalies) Neonatal Mortality Rates by Facility RHA, Alberta, 2000

Place of Birth	Live Births[1]	Live Births		Early Neonatal Deaths				Late Neonatal Deaths				Neonatal Mortality Rate[2,3]		Corrected Neonatal Mortality Rate[4,5]	
						Major Anomalies				Major Anomalies					
		≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g	≥500g	≥1000g
RHA Hospitals															
1	2,008	2,008	2,005	0	0	0	0	1	1	1	1	0.5	0.5	0.0	0.0
2	1,205	1,204	1,204	2	2	1	1	0	0	0	0	1.7	1.7	0.8	0.8
3	588	588	588	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
4	12,453	12,440	12,364	27	13	11	9	8	3	2	1	2.8	1.3	1.8	0.5
5	338	337	336	0	0	0	0	1	0	0	0	3.0	0.0	3.0	0.0
6	2,288	2,286	2,282	6	3	2	2	0	0	0	0	2.6	1.3	1.8	0.4
7	759	759	759	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
8	395	395	395	1	1	0	0	0	0	0	0	2.5	2.5	2.5	2.5
9	538	538	538	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
10	11,808	11,777	11,688	40	19	22	15	12	8	7	6	4.4	2.3	2.0	0.5
11	498	497	495	2	1	1	1	1	1	1	1	6.0	4.0	2.0	0.0
12	950	950	950	1	1	0	0	0	0	0	0	1.1	1.1	1.1	1.1
13	1,224	1,224	1,224	1	0	0	0	1	1	0	0	1.6	0.8	1.6	0.8
14	324	324	324	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
15	353	353	353	2	2	2	2	0	0	0	0	5.7	5.7	0.0	0.0
16	633	633	633	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
17	427	427	424	4	4	3	3	0	0	0	0	9.4	9.4	2.4	2.4
TOTAL HOSPITAL BIRT	**36,789**	**36,740**	**36,562**	**86**	**46**	**42**	**33**	**24**	**14**	**11**	**9**	**3.0**	**1.6**	**1.6**	**0.5**
OUT-OF-HOSPITAL BIR	**353**	**352**	**350**	**2**	**1**	**0**	**0**	**1**	**1**	**1**	**1**	**8.5**	**5.7**	**5.7**	**2.9**
PROVINCIAL TOTAL	**37,142[6]**	**37,092**	**36,912**	**88**	**47**	**42**	**33**	**25**	**15**	**12**	**10**	**3.0**	**1.7**	**1.6**	**0.5**

Sources: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals.
*Out-of-hospital data from Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Notes:
1. Weights were not recorded for 3 hospital births and 1 out-of-hospital birth.
2. (Early Neonatal Deaths≥500g + Late Neonatal Deaths≥500g) / Live Births ≥500g X 1000.
3. (Early Neonatal Deaths≥1000g + Late Neonatal Deaths≥1000g) / Live Births ≥1000g X 1000.
4. (Early Neonatal Deaths≥500g Corrected + Late Neonatal Deaths≥500g Corrected) / Live Births ≥500g Corrected X 1000.
5. (Early Neonatal Deaths≥1000g Corrected + Late Neonatal Deaths≥1000g Corrected) / Live Births ≥1000g Corrected X 1000.
6. Vital Statistics Alberta reports 37,155 live births in Alberta in 2000 (36,606 of these to Alberta residents).

Corrected rates exclude deaths due to major anomalies.
RHA boundaries are current as of 2001.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A82 Neonatal, Post-neonatal and Infant Mortality Rates By Residence and Facility RHA, Alberta, 1998 - 2000 combined

RHA	Neonatal Deaths	Post-Neonatal Deaths	Infant Deaths	Live Births	Neonatal Mortality Rate (per 1,000 Live Births)	Post-Neonatal Mortality Rate (per 1,000 Live Births)	Infant Mortality Rate (per 1,000 Live Births)
Residence							
1	15	18	33	6,099	2.5	3.0	5.4
2	11	6	17	3,681	3.0	1.6	4.6
3	5	13	18	2,659	1.9	4.9	6.8
4	111	57	168	35,018	3.2	1.6	4.8
5	5	3	8	1,889	2.6	1.6	4.2
6	28	21	49	7,460	3.8	2.8	6.6
7	7	4	11	2,918	2.4	1.4	3.8
8	10	8	18	3,427	2.9	2.3	5.3
9	7	3	10	1,895	3.7	1.6	5.3
10	122	58	180	29,451	4.1	2.0	6.1
11	16	7	23	3,638	4.4	1.9	6.3
12	15	11	26	3,979	3.8	2.8	6.5
13	4	13	17	3,935	1.0	3.3	4.3
14	3	1	4	1,081	2.8	0.9	3.7
15	11	8	19	1,479	7.4	5.4	12.8
16	7	1	8	1,769	4.0	0.6	4.5
17	14	7	21	1,519	9.2	4.6	13.8
Unknown	28	1	29	14			
Alberta	**419**	**240**	**659**	**111,911**	**3.7**	**2.1**	**5.9**
Facility							
1	6	14	20	6,188	1.0	2.3	3.2
2	5	4	9	3,472	1.4	1.2	2.6
3	2	7	9	1,683	1.2	4.2	5.3
4	149	63	212	37,258	4.0	1.7	5.7
5	2	1	3	773	2.6	1.3	3.9
6	12	12	24	7,392	1.6	1.6	3.2
7	2	4	6	2,314	0.9	1.7	2.6
8	1	7	8	1,231	0.8	5.7	6.5
9	4	6	10	1,719	2.3	3.5	5.8
10	216	91	307	36,262	6.0	2.5	8.5
11	3	4	7	1,620	1.9	2.5	4.3
12	1	9	10	3,053	0.3	2.9	3.3
13	3	11	14	3,742	0.8	2.9	3.7
14	0	0	0	1,075	0.0	0.0	0.0
15	3	4	7	1,112	2.7	3.6	6.3
16	3	0	3	1,731	1.7	0.0	1.7
17	7	3	10	1,281	5.5	2.3	7.8
Unknown	0	0	0	5			
Alberta	**419**	**240**	**659**	**111,911**	**3.7**	**2.1**	**5.9**

Sources: Vital Statistics, Birth File, Department of Government Services, January 2002 release.
Vital Statistics, Death File, Department of Government Services, May 2001 release.

Notes:
1. Neonatal deaths refers to deaths of live born infants less than 28 full days after birth.
2. Post-neonatal deaths refers to deaths of children between 28 full days and one year of age.
3. Infant deaths refers to deaths of children under one year of age.

RHA boundaries are current as of 1998.
Data include Alberta Residents only.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A83 Wigglesworth Classification of Perinatal and Neonatal Deaths, Alberta, 1996 - 2000

Wigglesworth Classification	Year									
	96		97		98		99		00	
	Cases	% of Total	Cases	% of Total	Cases	% of Total	Cases	% of Total	Cases	% of Total
Group 1 - Death before the start of labour.	111	27.8	106	26.5	96	28.7	125	28.7	97	23.7
Group 2 - Lethal or potential lethal malformation.	89	22.3	96	24.0	107	32.0	132	30.3	131	32.0
Group 3 - Deaths associated with prematurity.	119	29.8	107	26.8	74	22.2	98	22.5	109	26.7
Group 4 - Intrapartum Deaths, Neonatal Deaths <4 hours old, Neonatal Deaths >1000grams & >4hours old with evidence of cerebral birth trauma/asphyxia.	25	6.3	19	4.8	12	3.6	26	6.0	19	4.6
Group 5 - Neonate 37+ weeks gestation, stillbirth/neonatal death with defined specific condition.	55	13.8	72	18.0	45	13.5	55	12.6	53	13.0
Total	**399**	**100.0**	**400**	**100.0**	**334**	**100.0**	**436**	**100.0**	**409**	**100.0**

Source: Statistics reported to the Reproductive Care Committee by Medical Records Departments of the hospitals.

Note: Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A84 Wigglesworth Classification of Perinatal and Neonatal Deaths, Alberta, 1999

Group Classification	Number of Babies
Group 1 - Deaths before the start of labour	125
<37 weeks	83
>36 weeks	42
<1000 grams	50
>999 grams	74
<2500 grams	88
>2499 grams	36
* one baby not weighed in this category	
Subgroup 1.1 - Abruptio	33
Group 2 - Lethal or potentially lethal malformation	132
Stillbirths	65
Neonatal Deaths	67
Subgroup 2.1 - Secondary malformation	11
Group 3 - Deaths associated with prematurity	98
Neonatal Deaths <37 weeks	58
<1000 grams	94
<1000 gram Stillbirths - Intrapartum	27
<1000 grams Early Neonatal Deaths	51
<1000 grams Late Neonatal Deaths	5
Subgroup 3.1 - Extreme immaturity	78
* one baby not weighed in this category	
Group 4 - Intrapartum Deaths, neonatal deaths <4 hours old, neonatal deaths >1000 grams and >4 hours old with evidence of cerebral birth trauma/asphyxia.	26
Intrapartum Deaths	9
Neonatal Deaths <4 hours of age	0
Neonatal Deaths >1000 grams >4 hours of age cerebral birth trauma or asphyxia	13
Subgroup 4.1 - Massive antepartum hemorrhage/abruptio	11
Group 5 - Neonatal 37+ weeks gestation, stillbirths/neonatal death with defined specific conditions.	55
Antepartum deaths	38
Intrapartum deaths	2
Neonatal deaths	15
<1000 grams	10
>999 grams	44
<2500 grams	22
>2499 grams	33
Defined Specific Conditions:	
Cord accident/Cord anomaly	28
Inborn error of Metabolism	1
Twin to twin transfusion	7
Specific or unusual infection	4
Fetomaternal Bleed	0
Placental Pathology	0
Birth Trauma	1
Hydrops not associated with malformation	2
Unexpected, Unusual Finding:	
Unexplained death in term newborn	6
Sudden Infant Death Syndrome	3
Other - cocaine associated death, overlaying of sibling, complications of intrauterine transfusion	3

Source: Statistics reported to the Reproductive Care Committee by Medical Records Departments of the hospitals.

Note: Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A 85 Wigglesworth Classification of Perinatal and Neonatal Deaths, Alberta, 2000

Group Classification	Number of Babies
Group 1 - Deaths before the start of labour	**97**
<37 weeks	69
>36 weeks	28
<1000 grams	44
>999 grams	53
<2500 grams	63
>2499 grams	34
* one baby not weighed in this category	
Subgroup 1.1 - Abruptio	17
Group 2 - Lethal or potentially lethal malformation	**131**
Stillbirths	60
Neonatal Deaths	71
Subgroup 2.1 - Secondary malformation	4
Group 3 - Deaths associated with prematurity	**109**
Neonatal Deaths <37 weeks	73
<1000 grams	104
<1000 gram Stillbirths - Intrapartum	40
<1000 grams Early Neonatal Deaths	59
<1000 grams Late Neonatal Deaths	9
Subgroup 3.1 - Extreme immaturity	87
* one baby not weighed in this category	
Group 4 - Intrapartum Deaths, neonatal deaths <4 hours old, neonatal deaths >1000 grams and >4 hours old with evidence of cerebral birth trauma/asphyxia.	**19**
Intrapartum Deaths	14
Neonatal Deaths <4 hours of age	1
Neonatal Deaths >1000 grams >4 hours of age cerebral birth trauma or asphyxia	3
Subgroup 4.1 - Massive antepartum hemorrhage/abruptio	5
Group 5 - Neonatal 37+ weeks gestation, stillbirths/neonatal death with defined specific conditions.	**53**
Antepartum deaths	38
Intrapartum deaths	2
Neonatal deaths	13
<1000 grams	15
>999 grams	38
<2500 grams	25
>2499 grams	28
Defined Specific Conditions:	
Cord accident/Cord anomaly	33
Inborn error of Metabolism	1
Twin to twin transfusion	4
Specific or unusual infection	4
Fetomaternal Bleed	5
Placental Pathology	0
Trauma - Maternal motor vehicle accident	0
Hydrops not associated with malformation	1
Unexpected, Unusual Finding:	
Unexplained death in term newborn	4
Other - bilirubin encephalopathy	1

Source: Statistics reported to the Reproductive Care Committee by Medical Records Departments of the hospitals.

Note: Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A86 Wigglesworth 1.0 Factors Related to Death Before the Start of Labour, Alberta 1999 - 2000

	1999	2000
Placental Insufficiency	13	20
Abruptio Placenta / Placenta Previa	35	20
Cord Accident	15	18
Maternal Disease - Pregnancy-Induced Hypertension, Diabetes	11	8
Unexplained	51	31

Source: Statistics reported to the Reproductive Care Committee by Medical Records Departments of the hospitals.

Note: Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A87 Wigglesworth 3.0 Factors Related to Deaths Associated with Prematurity, Alberta, 1999 - 2000

	1999	2000
Abruptio Placenta / Placenta Previa	23	36
Maternal Disease - Hemolysis, Elevated Liver Enzymes and Low Platelet Count, Pregnancy-Induced Hypertension, Diabetes	4	7
Multiple Pregnancies	14	8
Incompetent Cervix	12	13
Infection	11	8
Preterm Rupture of Membranes	28	32
Unexplained / No prenatal care	6	5

Source: Statistics reported to the Reproductive Care Committee by Medical Records Departments of the hospitals.

Note: Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A88 Wigglesworth 4.0 Factors Related to Intrapartum Deaths, Neonatal Deaths <4 Hours Old, Neonatal Deaths >1000 grams and >4 Hours Old with Evidence of Cerebral Birth Trauma/Asphyxia, Alberta, 1999 - 2000

	1999	2000
Placental Insufficiency	1	1
Abruptio Placenta / Placenta Previa	14	7
Cord Accident	0	3
Maternal Disease - Pregnancy-Induced Hypertension, Diabetes	2	4
Birth Trauma / Delayed Birth	1	2
Intrauterine Infection	2	0
Unexplained	6	2

Source: Statistics reported to the Reproductive Care Committee by Medical Records Departments of the hospitals.

Note: Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A89 Wigglesworth 5.0 Neonatal Deaths ³37 weeks Gestation, Stillbirths, and Neonatal Deaths with Defined Specific Conditions, Alberta, 1996 - 2000

Defined Specific Conditions/ Unusual Finding	Year				
	96	97	98	99	00
Cord accident/Cord anomaly	11	32	15	28	33
Inborn error of Metabolism	0	1	2	1	1
Twin to twin transfusion	3	9	5	7	4
Specific or unusual infection	6	5	4	4	4
Fetomaternal Bleed	0	5	1	0	5
Placental Pathology	0	0	0	0	0
Trauma-birth or motor vehicle accident	0	0	1	1	0
Hydrops not associated with malformation	1	3	0	2	1
Unexplained death in term newborn	11	11	8	6	4
Sudden Infant Death Syndrome	3	2	4	3	0
Other - bowel perforation, cardiomyopathy, severe maternal anemia, iatrogenic, persistent pulmonary hypertension, meconium aspiration, peritonitis/appendicitis, overlaying of sibling, maternal cardiac arrest, alveolar dysplasia, cocaine related death, bilirubin encephalopathy.	5	1	5	3	1

Source: Statistics reported to the Reproductive Care Committee by Medical Records Departments of the hospitals.

Note: Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A90a Major Anomalies as Cause of Death, Alberta, 1999

Anomaly Classification	Stillbirths			Early Neonatal Deaths			Late Neonatal Deaths			Total[1]		
	<500g	500 - 999g	>999g	<500g	500 - 999g	>999g	<500g	500 - 999g	>999g	Stillbirths	Early Neonatal Deaths	Late Neonatal Deaths
Neural Tube Defects	4	1	3	1	1	1	0	0	0	8	3	0
Other Central Nervous System	0	0	0	0	2	0	0	0	0	0	2	0
Heart	4	0	2	0	0	8	0	0	4	6	8	4
Circulatory System	0	0	1	0	0	0	0	0	0	1	0	0
Respiratory System	1	1	0	0	1	4	0	0	2	2	5	2
Gastrointestinal System	2	0	3	0	0	1	0	0	1	5	1	1
Genital Organs	0	0	0	0	0	0	0	0	0	0	0	0
Urinary System	2	0	0	0	3	2	0	0	1	2	5	1
Musculoskeletal Deformity	2	0	1	0	3	2	0	0	0	3	5	0
Integument	0	0	0	0	0	0	0	0	0	0	0	0
Chromosomal	17	4	4	2	8	11	0	0	1	25	21	1
Other/Unspecified Congenital	4	4	5	0	1	5	0	0	2	13	6	2
Total	36	10	19	3	19	34	0	0	11	65	56	11

Source: Statistics reported to the Reproductive Care Committee by Medical Records Departments of the hospitals.

1. Total deaths due to congenital anomalies = 132; total deaths (Stillbirth + Neonatal) = 436.

Note: Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A90b Major Anomalies as Cause of Death, Alberta, 2000

Anomaly Classification	Stillbirths			Early Neonatal Deaths			Late Neonatal Deaths			Total[1]		
	<500g	500 - 999g	>999g	<500g	500 - 999g	>999g	<500g	500 - 999g	>999g	Stillbirths	Early Neonatal Deaths	Late Neonatal Deaths
Neural Tube Defects	3	2	2	2	1	2	0	0	1	7	5	1
Other Central Nervous System	2	0	0	0	0	1	0	0	0	2	1	0
Heart	0	0	4	3	0	2	0	1	6	4	5	7
Circulatory System	0	1	0	0	1	1	0	0	0	1	2	0
Respiratory System	0	1	0	0	1	5	0	1	1	1	6	2
Gastrointestinal System	0	0	1	0	0	0	0	0	1	1	0	1
Genital Organs	0	0	0	0	0	0	0	0	0	0	0	0
Urinary System	0	3	0	0	0	1	0	0	0	3	1	0
Musculoskeletal Deformity	3	3	1	1	2	2	0	0	0	7	5	0
Integument	0	0	0	0	0	0	0	0	0	0	0	0
Chromosomal	9	6	4	4	1	6	0	0	1	19	11	1
Other/Unspecified Congenital	6	4	5	7	2	13	0	0	2	15	22	2
Total	23	20	17	17	8	33	0	2	12	60	58	14

Source: Statistics reported to the Reproductive Care Committee by Medical Records Departments of the hospitals.

1. Total deaths due to congenital anomalies = 132; total deaths (Stillbirth + Neonatal) = 409.

Note: Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A91 Major Anomalies as Cause of Death, Alberta, 1996 - 2000

Anomaly Classification	Year 96			97			98			99			00		
	SB[1]	NND[2]	% of Total Deaths[3]	SB[1]	NND[2]	% of Total Deaths[3]	SB[1]	NND[2]	% of Total Deaths[3]	SB[1]	NND[2]	% of Total Deaths[3]	SB[1]	NND[2]	% of Total Deaths[3]
Neural Tube Defects/ Other Central Nervous System	8	9	4.3	15	7	5.5	10	5	4.5	8	5	3.0	9	7	3.9
Cardio-Respiratory	6	19	6.3	5	10	3.8	5	15	6.0	9	19	6.4	6	22	6.8
Gastrointestinal / Musculoskeletal / Integument	9	2	2.8	4	7	2.8	2	7	2.7	8	7	3.4	8	6	3.4
Genitourinary	9	3	3.0	8	4	3.0	2	9	3.3	2	6	1.8	3	1	1.0
Chromosomal	8	9	4.3	13	12	6.3	22	16	11.4	25	22	10.8	19	12	7.6
Other/Unspecified Congenital	11	5	4.0	7	6	3.3	8	8	4.8	13	8	4.8	15	24	9.5
Total	**51**	**47**	**24.6**	**52**	**46**	**24.5**	**49**	**60**	**32.8**	**65**	**67**	**30.3**	**60**	**72**	**32.3**

Source: Statistics reported to the Reproductive Care Committee by Medical Records Departments of the hospitals.

Notes: 1. SB = Stillbirths.

2. NND = Neonatal deaths (Early + Late).

3. Total (Stillbirths + Early Neonatal Deaths + Late Neonatal Deaths) for specific anomaly / Total deaths for that year (Stillbirths + Early Neonatal Deaths + Late Neonatal Deaths) x 100.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A92 Summary of Antepartum Deaths ≥2500 grams, Alberta, 1999 and 2000

Cause of Death	1999		2000	
	Cases	%	Cases	%
Intrauterine Asphyxia - Cause Unknown	31	50.0	23	40.4
Nuchal cord/Knot/Occlusion	19	30.6	17	29.8
Placental Abruptio/Previa	6	9.7	7	12.3
Placental Insufficiency	3	4.8	4	7.0
Intrauterine Infection	1	1.6	0	0.0
Congenital Anomaly	2	3.2	3	5.3
Circulatory - Twin to Twin Transfusion, Feto-maternal hemorrhage	0	0.0	3	5.3
Total	62	100.0	57	100.0

Source: Statistics reported to the Reproductive Care Committee by Medical Records Departments of the hospitals.

Note: Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A93 Causes of Death for Intrapartum and Neonatal Deaths ≥2500 grams (Excluding Congenital Anomalies), Alberta, 1999 and 2000

Cause of death	1999		2000	
	Cases	%	Cases	%
Sudden Infant Death Syndrome	3	12.0	0	0.0
Cord Accident	2	8.0	5	21.7
Intrapartum Hemmorhage	7	28.0	6	26.1
Birth Trauma	1	4.0	1	4.3
Infection	2	8.0	0	0.0
Meconium Aspiration	1	4.0	0	0.0
Severe Pulmonary Hypoplasia	1	4.0	0	0.0
Hydrops - caused by anemia	1	4.0	0	0.0
Septic Shock	0	0.0	1	4.3
Bilirubin encephalitis	0	0.0	1	4.3
Cause undetermined	7	28.0	9	39.1
Total	25	100.0	23	100.0

Source: Statistics reported to the Reproductive Care Committee by Medical Records Departments of the hospitals.

Note: Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A94 Infant Mortality Rates by Gender, Alberta, 1986 - 2000

Year	Infant Mortalities[1]		Live Births[2]		Infant Mortality Rate[3]	
	Female	Male	Female	Male	Female	Male
86	162	224	21,133	22,171	7.7	10.1
87	135	176	20,208	21,499	6.7	8.2
88	142	198	20,535	21,134	6.9	9.4
89	128	190	21,036	21,942	6.1	8.7
90	144	194	20,654	21,979	7.0	8.8
91	129	154	20,755	21,614	6.2	7.1
92	140	159	20,395	21,278	6.9	7.5
93	117	144	19,428	20,476	6.0	7.0
94	123	167	19,110	20,349	6.4	8.2
95	117	150	18,858	19,670	6.2	7.6
96	99	132	18,065	19,406	5.5	6.8
97	76	103	17,806	18,740	4.3	5.5
98	84	119	18,232	19,295	4.6	6.2
99	101	117	18,545	19,226	5.4	6.1
00	99	139	18,003	18,610	5.5	7.5

Sources: Vital Statistics, Birth File, Department of Government Services, January 2002 release.
Vital Statistics, Death File, Department of Government Services, May 2001 release.

Notes:
1. Infant deaths refers to deaths of children under one year of age.
2. Live births with unknown gender are excluded from these columns.
3. Rate per 1,000 live births.

Data include Alberta residents only.
Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A95 Infant Deaths by Residence RHA and Facility RHA, Alberta, 1986 - 2000

RHA	Year														
	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
Residence															
1	20	24	14	23	18	19	14	16	20	18	14	15	8	12	13
2	8	3	11	11	10	7	8	5	6	8	9	6	11	3	3
3	3	5	6	4	5	9	7	7	9	4	3	5	5	6	7
4	92	72	82	83	111	63	86	73	72	68	58	41	44	64	60
5	4	11	8	3	2	4	4	10	8	4	7	4	1	2	5
6	29	18	18	21	23	18	11	32	21	20	16	8	13	18	18
7	16	11	10	7	8	9	10	3	12	9	8	5	3	4	4
8	10	9	11	10	12	9	9	2	11	5	4	7	7	7	4
9	8	3	11	10	6	6	8	2	8	7	8	6	3	4	3
10	132	111	106	91	92	98	90	62	82	82	53	56	45	63	72
11	8	14	13	6	8	9	12	9	10	6	6	4	5	4	14
12	10	14	16	16	9	9	15	16	10	12	11	8	7	11	8
13	16	4	12	18	14	9	6	8	9	10	12	6	5	4	8
14	7	0	2	1	2	5	3	3	2	2	4	2	2	0	2
15	9	2	4	6	5	4	5	3	4	3	7	2	2	10	7
16	5	5	10	4	6	3	5	5	3	3	3	3	3	2	3
17	9	5	6	5	7	2	6	6	3	6	8	1	12	2	7
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	27	2	0
Alberta	**386**	**311**	**340**	**319**	**338**	**283**	**299**	**262**	**290**	**267**	**231**	**179**	**203**	**218**	**238**
Facility															
1	12	17	9	18	14	16	10	7	11	11	9	8	4	8	8
2	4	1	5	5	3	2	4	5	5	6	6	2	5	3	1
3	1	1	3	1	2	6	1	1	3	1	1	2	4	2	3
4	103	94	99	91	121	73	98	99	90	81	73	54	67	73	72
5	2	3	4	1	0	1	3	0	3	1	2	1	2	0	1
6	12	6	6	12	10	10	6	16	9	8	13	3	7	6	11
7	5	7	4	1	2	5	3	2	2	2	2	1	0	2	4
8	7	3	3	5	2	2	4	0	9	1	1	1	2	3	3
9	3	0	8	6	5	2	3	2	5	4	2	2	3	4	3
10	210	161	172	155	154	144	140	108	138	133	99	93	95	101	111
11	1	5	5	2	4	3	5	1	3	2	3	0	2	1	4
12	3	9	5	8	3	5	7	9	5	5	3	5	2	5	3
13	7	1	6	8	7	6	5	3	2	3	6	3	5	3	6
14	5	0	1	0	1	3	2	3	1	1	2	1	0	0	0
15	3	2	1	2	3	2	1	2	2	3	1	1	1	4	2
16	2	1	6	2	3	1	2	2	0	2	2	1	1	2	0
17	6	0	3	2	4	2	5	2	2	3	6	1	3	1	6
Alberta	**386**	**311**	**340**	**319**	**338**	**283**	**299**	**262**	**290**	**267**	**231**	**179**	**203**	**218**	**238**

Source: Vital Statistics, Death File, Department of Government Services, May 2001 release.

Notes: Infant deaths refers to deaths of children under one year of age.

RHA boundaries are current as of 1998.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A96 Maternal Mortality Rates, Alberta, 1961 - 2000

Year[2]	Maternal Deaths				Rates[1]	
	Total	Direct	Indirect	Unrelated	Overall	Direct
61-65	18	8	4	6	1.0	0.4
66-70	11	4	2	5	0.7	0.3
71-75	10	3	1	6	0.7	0.2
76-80	6	1	2	3	0.3	0.1
81-85	7	2	2	3	0.3	0.1
86-90	8	2	1	5	0.4	0.1
91-95	5	2	2	1	0.2	0.1
96	6	2	2	2	1.6	0.5
97	1	1	0	0	0.3	0.3
98	3	1	2	0	0.8	0.3
99	1	0	0	1	0.3	0.0
00	0	0	0	0	0.0	0.0

Sources: Statistics reported to the Committee on Reproductive Care by Medical Records Departments of the hospitals.

Vital Statistics Annual Reviews, Alberta Vital Statistics.

Notes:

1. Rates are per 10,000 live births.
2. All figures (except 1996 to 2000) are for the five year period combined.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A97 Live Births by Number of Live Births to Mother, Alberta, 1986 - 2000

Year	Total[1]	Number of live births to mother							
		1	2	3	4	5	6	7	8 or more
Live births									
86	42,571	17,302	15,173	6,677	2,258	651	258	118	134
87	40,976	16,345	14,458	6,735	2,249	684	269	107	129
88	40,875	16,450	14,274	6,649	2,261	713	260	134	134
89	42,128	16,694	14,861	6,955	2,338	714	292	126	148
90	41,925	16,833	14,504	6,919	2,346	796	284	118	125
91	41,639	16,680	14,360	6,863	2,391	786	309	123	127
92	40,932	16,498	14,195	6,530	2,338	759	338	152	122
93	39,239	15,771	13,610	6,366	2,170	746	296	153	127
94	38,923	15,969	13,376	6,183	2,147	692	306	127	123
95	37,938	15,531	13,143	5,915	2,089	690	276	151	143
96	36,964	14,911	12,992	5,741	2,015	690	326	142	147
97	36,085	14,684	12,714	5,396	1,987	712	333	125	134
98	36,942	15,223	12,868	5,609	1,944	694	305	143	156
99	37,214	15,562	12,741	5,593	2,008	736	275	148	151
00	36,217	15,298	12,354	5,370	1,912	653	314	154	162
Percent of live births[2]									
86	100.0	40.6	35.6	15.7	5.3	1.5	0.6	0.3	0.3
87	100.0	39.9	35.3	16.4	5.5	1.7	0.7	0.3	0.3
88	100.0	40.2	34.9	16.3	5.5	1.7	0.6	0.3	0.3
89	100.0	39.6	35.3	16.5	5.5	1.7	0.7	0.3	0.4
90	100.0	40.2	34.6	16.5	5.6	1.9	0.7	0.3	0.3
91	100.0	40.1	34.5	16.5	5.7	1.9	0.7	0.3	0.3
92	100.0	40.3	34.7	16.0	5.7	1.9	0.8	0.4	0.3
93	100.0	40.2	34.7	16.2	5.5	1.9	0.8	0.4	0.3
94	100.0	41.0	34.4	15.9	5.5	1.8	0.8	0.3	0.3
95	100.0	40.9	34.6	15.6	5.5	1.8	0.7	0.4	0.4
96	100.0	40.3	35.1	15.5	5.5	1.9	0.9	0.4	0.4
97	100.0	40.7	35.2	15.0	5.5	2.0	0.9	0.3	0.4
98	100.0	41.2	34.8	15.2	5.3	1.9	0.8	0.4	0.4
99	100.0	41.8	34.2	15.0	5.4	2.0	0.7	0.4	0.4
00	100.0	42.2	34.1	14.8	5.3	1.8	0.9	0.4	0.4
Fertility Rate (per 1,000 women aged 15-49)									
86	55.4	22.5	19.7	8.7	2.9	0.8	0.3	0.2	0.2
87	53.3	21.3	18.8	8.8	2.9	0.9	0.3	0.1	0.2
88	52.7	21.2	18.4	8.6	2.9	0.9	0.3	0.2	0.2
89	53.8	21.3	19.0	8.9	3.0	0.9	0.4	0.2	0.2
90	52.5	21.1	18.2	8.7	2.9	1.0	0.4	0.1	0.2
91	51.4	20.6	17.7	8.5	2.9	1.0	0.4	0.2	0.2
92	49.8	20.1	17.3	8.0	2.8	0.9	0.4	0.2	0.1
93	47.3	19.0	16.4	7.7	2.6	0.9	0.4	0.2	0.2
94	46.6	19.1	16.0	7.4	2.6	0.8	0.4	0.2	0.1
95	45.1	18.5	15.6	7.0	2.5	0.8	0.3	0.2	0.2
96	43.5	17.6	15.3	6.8	2.4	0.8	0.4	0.2	0.2
97	41.9	17.0	14.7	6.3	2.3	0.8	0.4	0.1	0.2
98	41.9	17.3	14.6	6.4	2.2	0.8	0.3	0.2	0.2
99	41.3	17.3	14.1	6.2	2.2	0.8	0.3	0.2	0.2
00	39.7	16.8	13.5	5.9	2.1	0.7	0.3	0.2	0.2

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release

Note:
1. Total = total number of live births to mothers who have not had a stillbirth.
2. Percent of live births= percent of live births to mothers who have not had a stillbirth.

Data include Alberta residents only.

Populations are estimated at June 30, as viewed at December 31 of each year.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A98 Selected Indicators by Number of Live Births to Mother, Alberta, 1998 - 2000 Combined

Indicator	Number of Life Births to Mother				
	Total[1]	1	2	3	4
Mean birth weight for singleton term births (grams)	**3,485**	3,429	3,520	3,540	3,539
Low birth weight rate per 100 live births	**6.0**	6.2	5.5	6.0	6.8
Small for gestational age rate per 100 live singleton births	**8.4**	10.3	7.0	6.7	7.6
High birth weight (>=4000 g) rate per 100 live births	**12.5**	10.1	13.8	15.3	15.4
Large for gestational age rate per 100 live singleton births	**11.6**	8.7	13.3	14.9	15.0
Preterm rate per 100 live births	**7.7**	8.0	7.3	7.6	9.2
Midwife attendant rate per 1,000 live births	**5.1**	3.2	5.9	7.3	9.2

Source: Vital Statistics, Birth File, Department of Government Services, January 2002 release.

Note: 1. Total = All births where number of live births for the mother is between 1 and 4, and number of stillbirths for the mother is 0.

Data include Alberta residents only.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A99 Selected Maternal Postnatal Conditions, Alberta, 1999 and 2000 Combined

Condition	Cases[1]	Rate[2]
Shoulder dystocia[3]	2,438	3.3
Postpartum hemorrhage[4]	12,271	16.5
Depressive disorders[5]		
Prenatal[6]	1,827	2.5
Postnatal[7]		
Up to one month postpartum	1,617	2.2
Up to six months postpartum	5,534	7.4
Up to twelve months postpartum	9,493	12.8
Up to twenty-four months postpartum	12,428	16.7

Sources: Fee for Service Claims File, Alberta Health and Wellness.
Ambulatory Care Classification System, Alberta Health and Wellness.
hpatient Hospital Morbidity Data, Alberta Health and Wellness.
Alberta Health Care Insurance Plan Registration File, Alberta Health and Wellness.

Notes:
1. The number of women with a given disease/condition defined by the first three diagnoses recorded in any of the three data sources (Fee For Service Claims, Ambulatory Care Classification System, Inpatient Hospital Morbidity data) between January 1st, 1999 and December 31, 2000.
2. Rate is per 100 hospital deliveries.
3. ICD-9 diagnostic code 660.4.
4. ICD-9 diagnostic code 666.
5. ICD-9 diagnostic codes 296.2-3, 298.0, 301.1, 309.0-1, 311, 313.1.
6. The first date of visit for depressive disorder is within 40 weeks prior to giving birth.
7. The first date of visit for depressive disorder is between one month and twenty-four months after giving birth.

Table A100 Breastfeeding Upon Discharge Rates, Alberta, 1996 - 2000

Year	Number of Women Delivering	Number Breastfeeding Upon Discharge	% Breastfeeding on Discharge[1]
96	31,402	26,089	**83.1**
97	31,148	26,186	**84.1**
98	32,553	27,754	**85.3**
99	37,658	31,817	**84.5**
00	36,392	31,504	**86.6**

Source: Statistics reported to the Reproductive Care Committee by Medical Records Departments of the hospitals.

Notes: 1. Number of women breastfeeding upon discharge / Number of women delivering x 100.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A101 Breastfeeding Initiation Rates by Facility RHA, Alberta, 1998 - 2000

RHA	Year 98			99			00		
	Number of Women Delivering	Number Breastfeeding Upon Discharge	% Breastfeeding on Discharge[1]	Number of Women Delivering	Number Breastfeeding Upon Discharge	% Breastfeeding on Discharge[1]	Number of Women Delivering	Women Breastfeeding Upon Discharge	% Breastfeeding on Discharge[1]
1	2,079	1,790	86.1	2,104	1,821	86.5	1,975	1,753	88.8
2	1,242	987	79.5	1,234	988	80.1	1,194	992	83.1
3	562	534	95.0	530	432	81.5	590	550	93.2
4	12,078	10,688	88.5	12,299	11,010	89.5	12,305	11,129	90.4
5	366	318	86.9	360	287	79.7	340	294	86.5
6	2,300	1,935	84.1	2,406	2,083	86.6	2,262	1,989	87.9
7	837	719	85.9	821	699	85.1	756	639	84.5
8	433	311	71.8	437	354	81.0	394	338	85.8
9	575	471	81.9	605	497	82.1	535	454	84.9
10	7,536	6,403	85.0	12,183	10,095	82.9	11,637	9,775	84.0
11	515	411	79.8	554	410	74.0	500	414	82.8
12	1,124	900	80.1	1,085	751	69.2	949	757	79.8
13	1,164	1,001	86.0	1,285	1,040	80.9	1,220	1,041	85.3
14	401	270	67.3	358	297	83.0	325	279	85.8
15	393	302	76.8	360	257	71.4	354	267	75.4
16	639	460	72.0	619	421	68.0	626	463	74.0
17	309	254	82.2	418	375	89.7	430	370	86.0
Alberta	**32,553**	**27,754**	**85.3**	**37,658**	**31,817**	**84.5**	**36,392**	**31,504**	**86.6**

Source: Statistics reported to the Reproductive Care Committee by Medical Records Departments of the hospitals.

Notes: 1. Number of women breastfeeding upon discharge / Number of women delivering x 100.

RHA boundaries are current as of 2001.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A102 Female Population Aged 15 - 49 by Residence RHA, Alberta, 1986 - 2000

Residence RHA	Year														
	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
1	34,236	34,419	34,476	34,453	34,901	35,220	35,519	35,657	35,883	36,153	36,337	36,526	36,667	37,116	37,409
2	20,461	20,316	20,343	20,349	20,554	20,687	20,663	20,774	21,205	21,519	21,928	22,240	22,759	23,342	23,661
3	13,668	13,919	14,272	14,556	15,066	15,515	15,977	16,529	17,097	17,611	18,199	18,769	19,280	19,996	20,477
4	207,497	208,002	211,594	215,338	220,629	224,432	227,104	228,413	230,325	233,511	237,666	244,327	253,690	261,754	266,606
5	11,213	11,152	11,166	11,179	11,375	11,566	11,833	12,087	12,267	12,567	12,731	12,822	13,187	13,631	13,740
6	40,020	40,009	40,212	40,647	41,474	42,082	42,784	43,246	43,634	44,113	44,558	45,141	46,712	48,006	48,906
7	23,798	23,461	23,254	23,143	23,092	23,292	23,607	23,776	24,105	24,193	24,402	24,551	24,865	24,909	25,029
8	19,563	19,484	19,693	20,113	20,493	21,115	21,659	21,873	22,227	23,057	23,451	23,823	24,166	24,751	24,793
9	10,026	10,136	10,221	10,393	10,571	10,888	11,082	11,167	11,187	11,269	11,379	11,541	11,774	11,934	12,062
10	207,960	209,264	210,060	211,648	215,261	217,676	219,705	221,756	220,016	217,496	216,389	217,284	219,710	223,860	226,152
11	20,714	20,632	20,875	21,125	21,566	21,940	22,457	22,861	23,260	23,146	23,165	23,143	23,276	23,698	23,786
12	23,787	23,495	23,610	23,625	23,534	23,522	23,687	23,746	23,704	23,626	23,500	23,742	24,175	24,160	24,104
13	20,349	20,317	20,278	20,283	20,631	20,784	20,920	20,716	20,851	21,530	22,220	22,684	23,459	24,082	24,315
14	6,528	6,488	6,416	6,460	6,630	6,605	6,537	6,456	6,509	6,495	6,474	6,417	6,414	6,458	6,415
15	5,514	5,590	5,737	5,737	5,851	5,957	6,038	6,139	6,290	6,476	6,549	6,671	6,734	6,811	6,902
16	12,195	11,430	11,297	11,434	11,514	11,686	11,756	11,630	11,392	11,192	11,202	11,712	12,173	12,377	12,748
17	3,729	3,753	3,824	3,883	3,843	3,942	3,985	4,079	4,180	4,292	4,432	4,715	4,911	5,044	5,038
Unknown	181	116	86	86	81	56	64	72	46	39	24	39	107	52	39
Women aged 15-49	**681,439**	**681,983**	**687,414**	**694,452**	**707,066**	**716,965**	**725,377**	**730,977**	**734,178**	**738,285**	**744,606**	**756,147**	**774,059**	**791,981**	**802,182**
Total population	2,451,247	2,463,466	2,491,050	2,526,431	2,578,216	2,617,771	2,653,654	2,677,485	2,694,339	2,713,375	2,741,189	2,791,334	2,854,621	2,923,449	2,967,755

Source: Alberta Health Care Insurance Plan Registration File, Alberta Health and Wellness.

Note: Populations are estimated at June 30, as viewed at December 31 of each year.

Data may differ from previously published data due to differences in definitions and dates of data extraction.

Table A103 Female Population by Age Group, Alberta, 1986 - 2000

Residence RHA	Total	Age Group (Years)									
		10-14	15-17	18-19	15-19	20-24	25-29	30-34	35-39	40-44	>44
Live Births											
86	768,458	87,019	55,127	38,167	93,294	118,088	132,057	115,774	95,561	70,473	56,192
87	769,144	87,161	54,219	37,782	92,001	111,633	130,051	118,514	95,833	76,153	57,798
88	775,008	87,594	53,020	38,423	91,443	106,771	128,548	121,388	98,282	80,443	60,539
89	783,622	89,170	52,113	38,438	90,551	102,514	126,986	124,072	102,606	84,476	63,247
90	798,348	91,282	52,590	37,479	90,069	101,248	124,971	127,304	108,045	89,373	66,056
91	810,573	93,608	53,142	36,530	89,672	100,525	121,069	129,253	113,450	93,921	69,075
92	821,208	95,831	54,308	36,084	90,392	98,970	116,520	130,649	118,162	95,627	75,057
93	829,802	98,825	54,766	36,172	90,938	97,717	111,181	131,026	121,944	98,397	79,774
94	835,058	100,880	55,567	36,496	92,063	95,253	106,040	129,354	124,645	102,825	83,998
95	841,009	102,724	56,240	37,088	93,328	93,701	102,546	125,921	126,934	107,201	88,654
96	849,223	104,617	58,103	37,383	95,486	92,886	101,308	121,346	128,478	112,471	92,631
97	862,177	106,030	60,090	38,136	98,226	95,077	101,729	117,541	130,859	117,949	94,766
98	881,205	107,146	62,489	39,617	102,106	98,376	104,141	114,614	132,964	123,113	98,745
99	900,757	108,776	64,531	40,965	105,496	102,104	105,731	112,685	133,934	127,749	104,282
00	912,255	110,073	65,499	42,723	108,222	103,552	105,981	110,996	132,554	131,234	109,643

Source: Alberta Health Care Insurance Plan Registration File, Alberta Health and Wellness.

Note: Populations are estimated at June 30, as viewed at December 31 of each year.
Data may differ from previously published data due to differences in definitions and dates of data extraction.